RESPONSE ACTION CONTRACT FOR REMEDIAL, ENFORCEMENT OVERSIGHT, AND NON-TIME CRITICAL REMOVAL ACTIVITIES AT SITES OF RELEASE OR THREATENED RELEASE OF HAZARDOUS SUBSTANCES IN EPA REGION VIII

U.S. EPA CONTRACT NO. EP-W-05-049

Interior Dust Sampling of Anaconda Schools
Data Summary Report
Community Soils Operable Unit 16
Anaconda Smelter Superfund Site
Anaconda - Deer Lodge County, Montana

Work Assignment No.: 302-NGNG-0818

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STATEMENT OF AUTHENTICITY

The following data sets are considered to be final data generated or evaluated. Data have been designated as enforcement quality and screening quality as described in the *Clark Fork River Superfund Site Investigations (CFRSSI) Quality Assurance Project Plan (QAPP)* (ARCO 1992a) and *Data Management/Data Validation (DM/DV) Plan* (ARCO 1992b) as supplemented by addendum. The signatories below hereby stipulate to the authenticity and accuracy of the data and hereby waive any evidentiary or other objection as to the authenticity and accuracy of reference in endangerment assessments, public health evaluations, feasibility studies, and remedial design/remedial action (RD/RA) documents.

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List of Acronyms and Abbreviations

AR Atlantic Richfield Company

CDM Smith CDM Federal Programs Corporation CLP EPA Contract Laboratory Program

DQO data quality objective DSR data summary report

EPA U.S. Environmental Protection Agency HVS3 high-volume small surface sampler

mg/kg milligrams per kilogram
NPL National Priorities List

OSHA Occupational Safety and Health Administration

OU Operable Unit

PARCCS precision, accuracy, representativeness, completeness, comparability, and

sensitivity

QA quality assurance/quality control QAPP quality assurance project plan

QC quality control ROD Record of Decision

RPD relative percent difference
RPM Remedial Project Manager
SAP sampling and analysis plan

Site Anaconda Smelter Superfund Site $\mu g/m^3$ micrograms per cubic meter



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Executive Summary

This data summary report (DSR) summarizes the results of the 2018 Anaconda schools interior dust sampling activities within the Community Soils Operable Unit (OU) 16. Floor dust, personal air, and opportunistic grab samples are summarized for six separate sampling events, as follows:

- Head Start School March 24, 2018
- Anaconda Junior/Senior High School March 25, 2018
- Lincoln Elementary School March 26, 2018
- Memorial Gym March 26, 2018
- Fred Moodry Middle School March 27, 2018
- Anaconda School District Administrative Building March 27, 2018

The purpose of the sampling was to collect data at school locations to assist in addressing questions regarding arsenic and lead in interior dust and the potential for students and school personnel to contact interior dust with arsenic and lead concentrations that exceed residential soil clean up levels (250 milligrams per kilogram [mg/kg] arsenic and 400 mg/kg lead). Data collection was designed to be consistent with the residential indoor and attic dust sampling previously conducted by the Atlantic Richfield Company (AR). AR conducted this residential sampling to address concerns by the community over potential arsenic and lead concentrations in interior and attic dust. Further background, site description, and study purpose details are presented in the report.

The following sample types were collected to support this study:

- Collection of floor dust samples using the High Volume Small Surface Sampler (HVS3). Samples from floor mats placed at building entrances, hard flooring, and carpet were taken using the HVS3 sampling apparatus. The HVS3 floor sample results are included in this DSR.
- Collection of surface dust samples by micro-vacuum sampling. Samples from horizontal surfaces in classrooms and offices (e.g., shelves, desks, file cabinets), boiler rooms, hallways, air vents, gymnasiums, roof accesses, an attic, and other locations were collected using a micro-vacuum technique. However, samples collected by micro-vacuum were determined to be unusable due to low sample mass. The U.S. Environmental Protection Agency is planning to resample certain high dust areas (such as boiler rooms, roof accesses, and attics) with an emphasis on obtaining an analyzable sample mass.
- Collection of personal air samples on sampling staff during sample collection activities. These air sample results are included in this DSR.
- Collection of opportunistic solid media samples for informational purposes. These sample results are included in this DSR.



Table 1 exhibits a summary of the locations sampled at the six different school buildings. Table 2 provides a summary of data for the samples collected with quality assessments as defined in the *Anaconda Smelter Superfund Site, Interior Dust Sampling of Anaconda Schools, Data Management Plan* (CDM Smith 2018a), including the floor dust data with laboratory flags and qualifier codes, and the enforcement and screening assessment. Table 3 presents the floor dust duplicate sampling results. Table 4 presents the floor dust field blank results. Table 5 presents the personal air sampling results. Table 6 presents the results of two opportunistic solid media samples.



Section 1

Introduction

This data summary report was prepared for the U.S. Environmental Protection Agency (EPA) by CDM Federal Programs Corporation (CDM Smith) and summarizes the results of the 2018 Anaconda schools dust sampling activities within the Community Soils Operable Unit (OU) 16 of the Anaconda Smelter Superfund Site (Site). Interior dust, personal air, and opportunistic grab samples are summarized for six separate sampling events conducted in March 2018, at the locations shown on Figure 1. The location names and dates are as follows:

- Head Start School March 24, 2018
- Anaconda Junior/Senior High School –
 March 25, 2018
- Lincoln Elementary School March 26, 2018
- Memorial Gym March 26, 2018
- Fred Moodry Middle School March 27, 2018

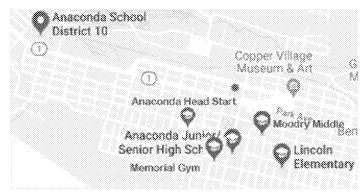


Figure 1 Locations of School Buildings and Head Start

Anaconda School District Administrative Building – March 27, 2018

The documents governing the 2018 Anaconda schools dust sampling are the Sampling and Analysis Plan/Quality Assurance Project Plan, Interior Dust Sampling of Anaconda Schools, Anaconda Smelter Superfund Site (CDM Smith 2018b) and the Sampling and Analysis Plan/Quality Assurance Project Plan, Interior Dust Sampling of Anaconda Head Start, Anaconda Smelter Superfund Site, Rev. 1 (CDM Smith 2018c). The above-referenced sampling and analysis plans/quality assurance project plans (SAP/QAPPs) describe the technical requirements for conducting and analyzing interior dust, personal air, and grab samples for the 2018 Anaconda Schools dust sampling study. The extent of mining- and smelting-related contamination and risk have been characterized at the Site through remedial investigation and risk assessment. Feasibility studies have been completed and remedies documented in the various Records of Decision (RODs). Remedial action, driven by arsenic and lead concentrations, is well underway and is being conducted by Atlantic Richfield Company (AR).

The community requested that the schools be sampled to confirm that students are not being exposed to levels of these contaminants greater than the current residential cleanup levels. The Anaconda School District requested that school interiors be sampled to determine the potential for school personnel and students to contact arsenic and lead in interior dust at levels that are elevated relative to current residential cleanup levels in Anaconda.



1.1 Background, Site Descriptions, and Purpose

Large scale smelting and concentrating operations were conducted at the Site for over 100 years. Smelter emissions dispersed contaminants elevated in arsenic and metals over more than 300 square miles. Large amounts of slag and tailings were also produced. Current estimated waste volumes at the Site include 230 million cubic yards of tailings, 30 million cubic yards of slag, and 500,000 cubic yards of flue dust. Approximately 20,000 acres of soil were impacted by airborne emissions and millions of gallons of groundwater were contaminated. The milling and smelting contaminants pose well documented risks to human health and the environment.

The Site was placed on the National Priorities List in 1983 and remedies were selected as documented by multiple RODs for the following five OUs: OU 15 Mill Creek – 1987, OU 11 Flue Dust – 1991, OU 7 Old Works/East Anaconda Development Area – 1994, OU 16 Community Soils – 1996 and 2013 (ROD Amendment), and OU 4 Anaconda Regional Water, Waste & Soils - 1998 and 2011 (ROD Amendment).

To date, remedial actions to address Site contaminants has been implemented on more than 340 residential properties and for more than 11,500 acres of open space. Remedial action is ongoing at OUs 7, 16, and 4. Site-wide activities affecting all OUs, including final institutional controls, operations and maintenance, and groundwater and surface water remedies are also ongoing. The OU of interest to this sampling event was OU 16.

The 2018 Anaconda schools sampling was conducted to address the data gap of no interior dust samples having been collected previously. The following activities to support the study were as follows:

- Collect High Volume Small Surface Sampler (HVS3) vacuum samples of representative flooring in accessible interior spaces for analysis of arsenic and lead.
- Collect samples of dust from floormats placed at representative entrances to the schools placed 1 week prior to interior dust sampling for analysis of arsenic and lead in dust accumulated after 5 days of use.
- Where dust is visible in significant amounts, collect dust samples on surfaces in representative interior spaces using a hand-held micro-vacuum for analysis of arsenic and lead in dust accumulated under typical building maintenance/cleaning conditions.
- Collect personal air monitoring samples, one per sampler per school per day. Personal air monitoring is not required by Occupational Safety and Health Administration (OSHA) standards for this sampling event, but personal air monitoring samples were added at the request of the Anaconda School District. Time weighted average samples were collected on CDM Smith personnel during sampling activities.
- Where potential interior or exterior sources not identified during the December 2017 school reconnaissance are identified, collect opportunistic samples. Examples include unknown material directly outside school entrances, such as the black material near the entrances of the Administrative Building.



Document observed conditions within or around sampled buildings that may indicate potential sources of dust to accessible interior spaces of buildings sampled.

1.2 Data Quality Objectives

The data quality objectives (DQOs) were provided in the SAP/QAPPs. The DQOs from the SAP/QAPPs (CDM Smith 2018b and 2018c) are presented in this section.

1.2.1 Step 1 - State the Problem

The purpose of this step is to describe the problem to be studied so that the focus of the study will be unambiguous.

No data existed on concentrations of arsenic and lead in dust in easily accessible interior spaces in the school buildings in Anaconda identified for this study. Sampling in residential properties across the Site had not identified an issue with interior dust, but no sampling had been done in the schools themselves. The community requested that the schools be sampled to confirm that students are not being exposed to levels of these contaminants greater than the current residential cleanup levels.

1.2.2 Step 2 – Identify the Goal of the Study

This step identifies how environmental data will be used in meeting objectives and solving the problem. The principal study question is:

Is arsenic or lead present under typical conditions on representative surfaces (flooring and other horizontal surfaces showing visible accumulations of dust) in accessible areas in the schools at concentrations that exceed residential cleanup levels?

Secondary study questions are:

- Is arsenic or lead being tracked in from the exterior (as indicated by its presence on floor mats placed the week prior to sampling at representative entrances)?
- Is arsenic or lead present on representative surfaces (horizontal surfaces showing visible accumulations of dust) in the schools at concentrations that exceed residential cleanup levels?
- Do conditions exist in the buildings that might indicate obvious pathways for transport of contamination (e.g., obvious cracks or gaps in ceilings, evidence of soil or other materials tracked into the building, peeling paint)?
- Is arsenic or lead present in air at levels of concern?

1.2.3 Step 3 – Identify Information Inputs

The purpose of this step is to identify the information that needed to be obtained and the measurements taken to resolve the decision statement.

The following types of data were collected to supplement existing data:



- Analytical Data. Arsenic and lead concentrations from dust on floors or surfaces, air, and solid media. Floor dust samples came from HVS3 vacuuming of flooring and floor mats. Surface dust samples came from micro-vacuumed dust accumulations in typically non-accessible areas. Personal air samples and opportunistic solid media samples were also collected. It should be noted that resampling of micro-vacuum samples is necessary due to low sample masses which resulted in reporting limits not being met.
- Sample-Specific Data. Field notes describing how the sample was collected, who collected the sample, duration of sampling, and number of locations in a given sample,
- Potential Exposure Path Data. Field form data describing visual observations of potential pathways.
- Geospatial Data. Locational data was collected for all samples, as well as descriptive data about the samples and sampling event (e.g., "above door jamb in classroom 11B")

Standard procedures were employed to ensure comparability in the analytical results. This included using a consistent sample labeling protocol. Specific parameters, detection limits, holding times, and other information are provided in SAP/QAPPs (CDM Smith 2018b and 2018c).

1.2.4 Step 4 – Define the Boundaries of the Study

The populations of interest are chemical and physical data for arsenic and lead concentration in dust in interior spaces in the buildings samples. Mobilization and field activities occurred on March 19, 2018, for the floor mats and from March 24 to 27, 2018, for the remaining samples. Travel and sampling activities were conducted during daylight hours, one school at a time. The order of the schools was affected by a basketball tournament that was concurrent with the sampling. Sampling and data collection was undertaken while the schools were on spring break.

In the context of this investigation, EPA will use the environmental media data collected to determine if concentrations of arsenic and lead in accessible interiors exceed the residential screening levels for those parameters.

1.2.5 Step 5 - Develop the Analytic Approach

The key parameter important to making decisions about the target populations is the individual result. The individual result for each sample will be used to answer the principal study questions. The usability of analytical data is determined based on the data validation and evaluation process.

1.2.6 Step 6 – Specify Performance or Acceptance Criteria

Tolerable limits on decision errors, which are used to establish performance goals for the data collection design are specified in this step. Decision makers are interested in knowing the true value of the constituent concentrations. Because analytical data are only estimates of the true values, decisions that are based on measurement data could be in error, which is referred to as decision error. There are two reasons why the decision maker may not know the true value of the constituent concentration:

Sampling design error occurs when the sampling design is unable to capture the complete extent of variability that exists in the true state of the environment. Concentrations may



vary over time and space. Limited sampling may miss some features of this inherent variation because it is usually impossible or impractical to measure every point of a population.

Measurement error refers to a combination of random and systematic errors that inevitably arise during the various steps to the measurement process. Analytical methods and instruments are never perfect; hence, a measurement can only estimate the true value of an environmental sample.

The combination of sampling design and measurement error is the total study error. Because it is impossible to eliminate total study error, basing decisions on sample concentrations may lead to a decision error. These errors may lead to either over-estimating or under-estimating the concentration of environmental contaminants. For example, over-estimating could result in removal of dust that is not a risk. Under-estimating may result in leaving contamination in place, which could continue to expose targets to unacceptable levels of contaminants.

Specific data validation processes were performed to evaluate whether analytical results were within acceptable limits. The data validation and usability discussion is presented in Appendix A. An evaluation of analytical control limits and of the precision, accuracy, representativeness, completeness, comparability, and sensitivity (PARCCS) parameters was performed. No significant issues were identified.

The PARCCS parameters are:

- Precision. The precision of a measurement is an expression of mutual agreement among individual measurements of the same property taken under prescribed similar conditions. Precision is quantitative and most often expressed in terms of relative percent difference. Field duplicate samples were collected to provide a measure of the contribution to overall variability of field-related sources. Contribution of laboratory-related sources to overall variability is measured through various laboratory quality control (QC) samples (e.g., laboratory duplicates). Chemical analytical data was evaluated for precision using field duplicates, laboratory duplicates, or other method QC, as applicable.
- Accuracy. Accuracy is the degree of agreement of a measurement with an accepted reference or true value and is a measure of the bias in a system. Accuracy is quantitative and usually expressed as the percent recovery of a sample result. Ideally, it is desirable that the reported concentration equals the actual concentration present in the sample. Chemical analytical data was validated for accuracy using laboratory QC samples, calibration recoveries, inductively coupled plasma interference check sample results, interference check sample recoveries, inductively coupled plasma serial dilution results, and field and laboratory blanks, as applicable.
- Representativeness. Representativeness expresses the degree to which sample data accurately and precisely represent (a) a characteristic of a population, (b) parameter variations at a sampling point, and/or (c) an environmental condition. Representativeness is most concerned with the proper design of the sampling plan and the absence of crosscontamination. Representativeness is a consideration that was employed during all sample



location and collection efforts and was assessed by reviewing field procedures and actual sampling locations versus planned locations.

- Comparability. Consistency in the acquisition, handling, and analysis of samples is necessary for comparing results. Standard EPA analytical methods were used to ensure comparability of results with other analyses performed in a similar manner.
- Completeness. Completeness is a measure of the amount of usable data obtained from a measurement system compared to the amount that was expected to be obtained. Evaluating the PARCCS parameters will assess usability. Those data that are evaluated and need no qualification, or are qualified as estimated data, are considered usable. Rejected data are not considered usable. Completeness was calculated following data evaluation. For this investigation, a completeness goal of 90% was intended for all analytical data. This goal was met for the HVS3 floor dust samples and the personal air samples. This goal was not met for the micro-vacuum surface dust samples; thus, resampling may be necessary to adequately achieve this project objective.
- Sensitivity. Sensitivity is related to the ability to compare analytical results with projectspecific levels of interest, such as delineation levels or action levels. Analytical quantitation limits for arsenic and lead in the floor dust and air samples were below the level of interest to allow an effective comparison.

1.2.7 Step 7 - Develop the Plan for Obtaining Data

This step identified a resource-effective data collection design for generating data expected to satisfy the DQOs. The data collection design (sampling program) is described in detail in Section B of the SAP/QAPPs (CDM Smith 2018b and 2018c). The data collection design followed the program listed below. In general, indoor dust sampling at the schools was consistent with that in residential properties, as described in the Final Interim Interior and Attic Dust Sampling and Analysis Plan (AR 2007).

- ** Floor Mat Sampling. The school currently uses floor mats or steel grids just inside the buildings at points of entry to reduce tracking of dirt through the interiors. Clean mats were put in place the week prior to the sampling to collect samples under typical conditions to determine if arsenic and/or lead are being tracked into the schools. The floor mat sampling followed ASTM D5438-17, Standard Practice for Collection of Floor Dust for Chemical Analysis. These results will be compared to arsenic and lead residential cleanup levels. Results from floor mat sampling are intended to provide information on the potential source of those contaminants (interior versus exterior), not to measure exposure.
- ** Floor Surface Sampling. A representative number of floor areas were vacuumed under typical conditions to obtain dust samples for analysis of arsenic and lead in readily accessible interiors within the schools. Floor dust sampling followed ASTM D5438-17, Standard Practice for Collection of Floor Dust for Chemical Analysis. These data will be compared to residential cleanup levels.
- Surface Sampling. Interior dust from representative accessible and limited access (e.g., air vents, the tops of ceiling tiles, shelves, and I-beams) surface areas were sampled to



determine if potential sources of contamination are present in these spaces. Surface dust sampling followed ASTM D 7144-05a, Standard Practice for Collection of Surface Dust by Micro-Vacuum Sampling for Subsequent Metals Determination. However, the reporting limit objectives for these samples could not be achieved; therefore, the surface sampling results cannot to be used to determine if arsenic and/or lead is present in concentrations exceeding cleanup levels.

- Personal Air Monitoring. Personal air samples collected air from the breathing zone of the samplers during collection of floor surface samples and surface sampling to obtain data on the presence of arsenic and lead in the ambient air. The samples were collected by OSHA Method ID-105, Inorganic Arsenic in Workplace Atmospheres.
- Opportunistic Samples. During the sampling events, opportunistic solid media grab samples were collected at the discretion of the field team for information purposes. Deposits of fine-grained materials observed outside Administration Building entrance and a paint chip sample from the Moodry Middle School boiler room were collected.

1.3 Data Quality Assessment

1.3.1 Step 1 - Review DQOs and Sampling Design

The DQOs for the Anaconda school sampling study are presented in the previous section. Interior dust, personal air, and opportunistic grab samples and discharge measurements were collected at select locations specifically to meet requirements and objectives stated in DQO Step 2 – Identify the Goal of the Study.

1.3.2 Step 2 – Conduct Preliminary Data Review

Data validation was conducted for the dust and personal air samples analyzed by the EPA Contract Laboratory Program laboratory Bonner Analytical Testing, Hattiesburg, Mississippi and Katahdin Analytical Services, Scarborough, Maine. The data usability assessment is presented in Appendix A and Tables 2 through 6.

CDM Smith's subcontractor laboratory, Katahdin Analytical Services, reported that the interior dust samples collected by micro-vacuum had insufficient mass to meet the reporting limit objectives. Therefore, analysis of these samples was terminated and resampling is planned at a future date with an emphasis on obtaining an analyzable sample mass.

Data validation was performed for all of the floor dust samples and laboratory QC samples analyzed by the EPA Contract Laboratory Program (CLP) laboratory, Bonner Analytical Testing. The air sampling data analyzed by Katahdin Analytical Services were also validated. A summary of the QA/QC validation and the laboratory results and qualifiers is presented in Appendix A. Data validation was not performed on the two opportunistic solid media samples that were collected for informational purposes only.

The summaries of analytical results along with applicable laboratory flags and validation qualifiers are provided in Table 2. Copies of the field logbook notes are included in Appendix B. Copies of the field sample data sheets are provided in Appendix C. Sample locations are provided in Appendix D. A data disk is provided in Appendix E.



1.3.3 Step 3 – Select the Statistical Test

The quality of the data in terms of PARCCS was evaluated using both laboratory and field generated QC samples. The data validation report is presented in Appendix A.

The data set was also evaluated in terms of completeness. The floor dust and air sampling can be considered 100% complete. Because the micro-vacuum surface dust samples could not meet reporting limits, the surface dust samples were 0% complete.

None of the validated data were rejected in the data validation process. All of the floor dust CLP data is enforcement quality. The personal air sample analyses conducted by Katahdin Analytical Services are also considered enforcement quality.

1.3.4 Step 4 – Verify Assumptions

The dust data necessary to evaluate the concentrations of key contaminants of concern (i.e., arsenic and lead) were collected from hard floors, carpets, and floor mats placed by the sample team at building entrances, as well as dust in air while sampling was being conducted. These data should be sufficient for evaluating typical dust conditions in actively used areas of the school buildings. The results of this study will be presented in the interpretive report prepared at a future date.

1.3.5 Step 5 - Conclusions Regarding Data Quality

The following is an assessment of the quality and quantity of the data collected under the SAP/QAPPs (CDM Smith 2018b and 2018c) and its intended uses as defined by the DQOs. The results of the Anaconda schools study will be presented in the interpretive report.

Intended Use of the Data	Assessment of the Data Quality
Is arsenic or lead present under typical conditions on representative surfaces (flooring and other horizontal surfaces showing visible accumulations of dust) in accessible areas in the schools at concentrations that exceed residential cleanup levels?	Data are of sufficient quality and quantity to begin this assessment
Is arsenic or lead being tracked in from the exterior (as indicated by its presence on floor mats placed the week prior to sampling at representative entrances)?	Data are of sufficient quality and quantity to begin this assessment
Is arsenic or lead present on representative surfaces (horizontal surfaces showing visible accumulations of dust) in the schools at concentrations that exceed residential cleanup levels?	Data are not of sufficient quantity to begin this assessment
Do conditions exist in the buildings that might indicate obvious pathways for transport of contamination (e.g., obvious cracks or gaps in ceilings, evidence of soil or other materials tracked into the building, peeling paint)?	Data are of sufficient quality and quantity to begin this assessment
Is arsenic or lead present in air at levels of concern?	Data are of sufficient quality and quantity to begin this assessment

1.4 Investigation Site Description

Investigation site descriptions were previously presented in Sections 1.1 and 1.2.

ÇPMI.

1.5 Sampling and Analysis Summary

1.5.1 Collection of Analytical and Field Data

In March 2018, interior dust, personal air, and opportunistic grab samples were collected at select locations as part of the Anaconda school sampling study. Appendix D shows the sample locations at each of the buildings. Table 1 summarizes the sample locations, dates, times, location descriptions, laboratories utilized, and analytical parameters for the Anaconda school sampling study.

1.6 Sampling Results

Analytical results, including the associated field QA/QC results, are summarized in Tables 2 through 6, as follows:

Table 2: Summary of Floor Dust Samples with Lab Flags, Data Validation Qualifiers, and Enforcement and Screening Assessment

Table 3: Summary of Floor Dust Sample Duplicate Sampling Results

Table 4: Summary of Floor Dust Rinsate Blank Analyses

Table 5: Summary of Personal Air Sampling Results

Table 6: Summary of Opportunistic Solid Media Samples

The data were assessed for usability based on the *Anaconda Smelter Superfund Site, Interior Dust Sampling of Anaconda Schools, Data Management Plan* (CDM Smith 2018a). The validation results, including enforcement and screening assessment qualifiers, laboratory flags, and validation qualifier codes are included with the results in each table.

The personal air samples collected by CDM Smith and analyzed by Katahdin Analytical Services did not have associated duplicate samples collected. However, QC samples including lot and field blanks of the sample cassettes were collected, and rigorous sampling and analysis procedures were employed. Therefore, all air sampling results are considered enforcement quality.

A summary of the QA/QC validation and laboratory data with qualifiers are included in Appendix A. Arsenic floor dust data analyzed by the CLP laboratory that were qualified with a "J" qualifier due to the sample result being between the method detection limit and the contract required detection limit were categorized enforcement quality.

The following summarizes the number of natural samples collected and analytes for the Anaconda schools sampling program:

- 55 natural floor dust samples
- Nine rinsate blank samples associated with the floor dust samples plus one sand blank
- Five field duplicate samples associated with the floor dust samples
- 25 personal air monitoring samples



Five field blanks and one lot blank associated with the personal air monitoring samples

Arsenic and lead were the only analytes analyzed for all samples.

The following summarizes the natural samples collected for HVS3 surface vacuum sampling:

Samples analyzed for arsenic for all schools were reported back within a range of 3.7 mg/kg to 37.3 mg/kg. Samples analyzed for lead for all schools were reported back within a range of 22.8 mg/kg to 264 mg/kg. Table 1 provides the school location, sample location, unique sample identifiers, and Table 2 shows the associated sample results.

The following summarizes the natural samples collected for personal air sampling:

Samples analyzed for arsenic for all schools were reported back within a range of 0.15 μ g/m3 to 0.61 μ g/m3. Samples analyzed for lead for all schools were reported back within a range of 0.024 μ g/m3 to 1.34 μ g/m3. Table 5 provides the unique sample identifiers and associated air sample results.

1.7 Field QC Results

Data validation reports were completed by CDM Smith for the Anaconda schools sampling event. The completed validation reports are included in Appendix A. Laboratory flags and data validation qualifiers were applied to results as required. Laboratory data flags and qualifiers are listed in Tables 2 through 5. For the solid media samples in Table 6, no duplicates were collected due to the informational purpose of these samples.

1.7.1 Rinsate Blanks and Sand Blanks

Rinsate blanks were used to assess the cleanliness of the HVS3 sampling vacuum after decontamination. Rinsate blanks were collected by vacuuming 8 to 10 grams of silica bead sand through the decontaminated HVS3 into an unused catch bottle. Rinsate blanks were collected at a frequency of one blank per school, as specified in the SAP/QAPPs. Nine rinsate blanks and one sand blank sample were collected.

1.7.2 Field Duplicates

Field duplicates are used to assess field and laboratory precision. Floor dust field duplicates were collected at a frequency of 1 duplicate per 20 natural samples, satisfying the SAP/QAPP requirements. Five field duplicate samples were collected for the floor dust samples. No duplicates were collected for the personal air samples or informational solid media samples.

All field and laboratory relative percent difference results were within criteria. The field duplicate floor dust results are presented in Table 3.

1.7.3 Air Sampling Cassette Lot and Field Blanks

Lot blanks are collected to ensure air samples for metals analysis are collected on metals-free filters. A lot blank is a randomly selected filter cassette from a manufactured lot. For this sampling effort, one lot blank was selected at random from the lot number of cassettes used for air sampling. The lot blank remains unopened prior to being submitted to the laboratory. The entire batch of cassettes may be rejected if any metals are detected in a lot blank.



Field blanks are collected to evaluate potential contamination introduced during sample collection, shipping and handling, or analysis. For this sampling effort, field blanks for surface dust and air were collected at a rate of 1 each per school. Field blanks are collected by removing the end cap of the sample cassette to expose the filter in the same area where sample collection occurs for about 30 seconds before re-capping the sample cassette. The field blanks are then analyzed for metals.

All of the lot and field blank samples were non-detect for metals. The lot and field blank results are presented in Table 5.



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Section 2

Field SAP Deviations

The following deviations or modifications to the SAP/QAPP (CDM 2018b and 2018c) are listed below as they apply to the Anaconda school sampling study.

The procedure for the collection of the rinsate blanks from the HVS3 vacuum were slightly altered from the processes described in the SAP/QAPPs (CDM Smith 2018b and 2018c). Laboratory-grade water was not used to prepare any of the rinsate blanks. Silica bead sand was used as the blank medium. The blank process described in the Head Start SAP/QAPP (CDM Smith 2018c) specified pouring the silica sand through the disassembled main manifold parts. In the field, the HVS3 was reassembled after decontamination and 8 to 10 grams of silica sand was sucked through the vacuum from a nitrile-gloved hand.

For the sampling event on March 24 at the Head Start school, the following deviations were noted:

- Sample ID HeadstartHVFloor007 was expanded to include the janitors closet and the laundry room within the first-floor children's bathroom; however, the required volume of dust was not able to be collected. A sample was collected from the first-floor lounge HeadstartHVlounge to replace HeadstartHVFloor007.
- Two additional opportunistic micro-vacuum samples were collected (inside air ducts of classroom 2 HeadstartMVOgrab001) and (ground level outside intake, utility room HeadstartMVOgrab002). These opportunistic samples were requested by Chas Arriss (City of Anaconda official). Because the micro-vacuum samples were not analyzable, there are no associated sample results for these locations.

For the sampling event on March 25 at the Anaconda Junior/Senior High School, the following deviations were noted (although this was noted on March 25, 2018, at the Anaconda Junior/Senior High School, this deviation affects all schools sampled during the study):

Floor mats were put in place on March 19, 2018, at all schools being sampled. After 4 to 8 days floormats were sampled and removed. The mats were sampled in place at all the schools and disposed of following sampling.

For the sampling event on March 26 at the Memorial Gym, the following deviations were noted:

Two additional opportunistic micro-vacuum samples were collected (concrete shelf below vent – MemGymOgrab001)) and (SW men's restroom – MemGymOgrab002) HeadstartMVOgrab002). These opportunistic samples were requested by Chas Arriss (City of Anaconda official). Because the micro-vacuum samples were not analyzable, there are no associated sample results for these locations.



For the sampling event on March 27 at the Fred Moodry Middle School, the following deviations were noted:

* An opportunistic sample was collected of paint chips on the floor of the boiler room (MoodryOgrab004). This opportunistic sample was requested by Charlie Colman (EPA). Opportunistic micro-vacuum samples were collected from a window cutout of first floor men's restroom (MoodryMVOgrab001) and first floor storage room I-beams (MoodryMVOgrab002). These opportunistic samples were requested by Chas Arriss (Anaconda – Deer Lodge County Public Works Director). An opportunistic micro-vacuum sample was collected from a drop ceiling tile, decided by the sampling field team (MoodryMVOgrab003). Opportunistic micro-vacuum samples collected from third floor vent in room 34 (MoodryMVOgrab005), second floor vent in room 25 (MoodryMVOgrab006), and first floor vent room 17 (MoodryMVOgrab007). These opportunistic samples were requested by Carl Nyman (Anaconda – Deer Lodge County Superfund Coordinator). Because the micro-vacuum samples were not analyzable, there are no associated sample results for these locations.

The surface dust sampling followed ASTM D 7144-05a, Standard Practice for Collection of Surface Dust by Micro-Vacuum Sampling for Subsequent Metals Determination. However, after sampling was completed, it was determined that the samples had insufficient mass to meet the reporting limit objectives. Resampling is planned at a future date with an emphasis on obtaining an analyzable sample mass.

2.1 Effects of Deviations on Project Objectives

Changing the floor dust locations because of not being able to obtain sufficient volume of dust in accordance with the SAP/QAPP (HeadstartHVFloor007 for HeadstartHVlounge) has no negative implications on data quality because the area was substituted by a more suitable location.

The deviations regarding the collection of additional samples have no negative implications on data quality as described in the SAP/QAPPs (CDM Smith 2018b and 2018c) because all samples were opportunistic and add to the objectives of the study. However, the lack of results for the micro-vacuum samples means that the objective to determine if "arsenic or lead present on representative surfaces (horizontal surfaces showing visible accumulations of dust) in the schools at concentrations that exceed residential cleanup levels" cannot be evaluated at this time.



Section 3

References

ARCO 1992a. Clark Fork River Superfund Site Investigations, Quality Assurance Project Plan. Prepared for ARCO by PTI Environmental Services, Bellevue, Washington. May 1992.

ARCO 1992b. Clark Fork River Superfund Site Investigations, Data Management/Data Validation Plan. Prepared by ARCO, Anaconda, Montana. June 23, 1992.

AR 2007. Anaconda Smelter NPL Site, Community Soils Operable Unit, Final Interim and Attic Dust Sampling and Analysis Plan. Prepared by the Atlantic Richfield Company. June 19. 2007.

CDM Smith 2018a. Anaconda Smelter Superfund Site, Interior Dust Sampling of Anaconda Schools, Data Management Plan. Prepared by CDM for EPA. February 2018.

CDM Smith 2018b. Sampling and Analysis Plan/Quality Assurance Project Plan, Interior Dust Sampling of Anaconda Schools, Anaconda Smelter Superfund Site February 7, 2018.

CDM Smith 2018c. Sampling and Analysis Plan/Quality Assurance Project Plan, Interior Dust Sampling of Anaconda Head Start, Anaconda Smelter Superfund Site, Rev. 1. March 20, 2018.



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Tables

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Table 1
Summary of Floor Dust Sample Locations, Descriptions, Sample Identification, and Analytical Parameters

Summary of Floor Dust Sample Location				ons, Descriptions, Sample Identification, and Analytical Parameters							
Sample #	Sample Date	Location	Area (ft2)	Matrix	Analyses	CLP Sample #	Container	Lab			
HeadstHVFlmat001	3/24/2018	Head Start - Gnd Front Door	12	Floor Dust	CLP ICP-MS Metals	мноаао	250 ml bottle	Bonner Analytical Testing Company			
HeadstHVFlmat002	3/24/2018	Head Start - 1st Floor Back Door	6	Floor Dust	CLP ICP-MS Metals	MH0AA1	250 ml bottle	Bonner Analytical Testing Company			
HeadstHVFlmatRinsate001	3/24/2018	Head Start - Floor Mat Rinsate	NA	Floor Dust	CLP ICP-MS Metals	MH0AA2	250 ml bottle	Bonner Analytical Testing Company			
HeadstHVFloor001	3/24/2018	Head Start - Gnd Hallway	42	Floor Dust	CLP ICP-MS Metals	МН0АА3	250 ml bottle	Bonner Analytical Testing Company			
HeadstHVFloor002	3/24/2018	Head Start - Gnd Classroom 1	210	Floor Dust	CLP ICP-MS Metals	MH0AA4	250 ml bottle	Bonner Analytical Testing Company			
HeadstHVFloor003	3/24/2018	Head Start - Gnd Classroom 2	240	Floor Dust	CLP ICP-MS Metals	MH0AA5	250 ml bottle	Bonner Analytical Testing Company			
HeadstHVFloor004	3/24/2018	Head Start - 1st Floor Hallway	80	Floor Dust	CLP ICP-MS Metals	МН0АА6	250 ml bottle	Bonner Analytical Testing Company			
HeadstHVFloor005	3/24/2018	Head Start - 1st Floor Classroom 3	65	Floor Dust	CLP ICP-MS Metals	MH0AA7	250 ml bottle	Bonner Analytical Testing Company			
HeadstHVFloor006	3/24/2018	Head Start - 1st Floor Classroom 4	180	Floor Dust	CLP ICP-MS Metals	MH0AA8	250 ml bottle	Bonner Analytical Testing Company			
HeadstHVFloor007	3/24/2018	Head Start - 1st Floor Children's Restroom	168	Floor Dust	CLP ICP-MS Metals	МН0АА9	250 ml bottle	Bonner Analytical Testing Company			
HeadstHVFlmat002D	3/24/2018	Head Start HV Floor Duplicate	6	Floor Dust	CLP ICP-MS Metals	мноаво	250 mL bottle	Bonner Analytical Testing Company			
LincolnHVFlmat001	3/26/2018	Lincoln-1st Floor Main Door	12	Floor Dust	CLP ICP-MS Metals	MH0AB1	250 ml bottle	Bonner Analytical Testing Company			
LincolnHVFlmat002	3/26/2018	Lincoln-1st Floor Playground Door	12	Floor Dust	CLP ICP-MS Metals	MH0AB2	250 ml bottle	Bonner Analytical Testing Company			
LincolnHVFlmat003	3/26/2018	Lincoln-Ada Gym	12	Floor Dust	CLP ICP-MS Metals	MH0AB3	250 ml bottle	Bonner Analytical Testing Company			
LincolnHVFlmat004	3/26/2018	Lincoln-1st Floor by RM11 Door	12	Floor Dust	CLP ICP-MS Metals	MH0AB4	250 ml bottle	Bonner Analytical Testing Company			
LincolnHVFlmatRinsate002	3/26/2018	Lincoln Floor Mat Rinsate	NA	Floor Dust	CLP ICP-MS Metals	MH0AB5	250 ml bottle	Bonner Analytical Testing Company			
LincolnHVFloorRinsate003	3/26/2018	Lincoln HV Floor Rinstate	NA	Floor Dust	CLP ICP-MS Metals	MH0AB6	250 ml bottle	Bonner Analytical Testing Company			
LincolnHVFloor001	3/26/2018	Lincoln-1st Floor Rm11	70	Surface Dust	CLP ICP-MS Metals	MH0AB7	250 ml bottle	Bonner Analytical Testing Company			
LincolnHVFloor002	3/26/2018	Lincoln-1st Floor Hall	180	Surface Dust	CLP ICP-MS Metals	MH0AB8	250 ml bottle	Bonner Analytical Testing Company			
LincolnHVFloor003	3/26/2018	Lincoln-1st Floor Library	83	Surface Dust	CLP ICP-MS Metals	мноав9	250 ml bottle	Bonner Analytical Testing Company			
LincolnHVFloor004	3/26/2018	Lincoln-2nd Floor Rm23	165	Surface Dust	CLP ICP-MS Metals	MH0AC0	250 ml bottle	Bonner Analytical Testing Company			
LincolnHVFloor005	3/26/2018	Lincoln-2nd Floor Staff Lounge	80	Surface Dust	CLP ICP-MS Metals	MH0AC1	250 ml bottle	Bonner Analytical Testing Company			
LincolnHVFloor006	3/26/2018	Lincoln-2nd Floor Hall	225	Surface Dust	CLP ICP-MS Metals	MH0AC2	250 ml bottle	Bonner Analytical Testing Company			
LincolnHVFloor007	3/26/2018	Lincoln-Ada Gym Stage/Classroom	110	Surface Dust	CLP ICP-MS Metals	MH0AC3	250 ml bottle	Bonner Analytical Testing Company			
LincolnHVFloor008	3/26/2018	Lincoln-Ada Gym Ball Court	300	Surface Dust	CLP ICP-MS Metals	MH0AC4	250 ml bottle	Bonner Analytical Testing Company			
LincolnHVFloor003D	3/26/2018	Lincoln - Floor Duplicate (D)	80	Floor Dust	CLP ICP-MS Metals	MH0AC5	250 ml bottle	Bonner Analytical Testing Company			
MoodryHVFlmat001	3/27/2018	Moodry-1st Floor Main Door	12	Floor Dust	CLP ICP-MS Metals	MH0AC6	250 ml bottle	Bonner Analytical Testing Company			

Table 1
Summary of Floor Dust Sample Locations, Descriptions, Sample Identification, and Analytical Parameters

		initiary of Floor Dust Sample Locations,	Descriptio	iio, oaiiipic i	acritification, and	<u>a Allalytical I</u>	Taranic (C13	
MoodryHVFlmat002	3/27/2018	Moodry-1st Floor South Door	12	Floor Dust	CLP ICP-MS Metals	MH0AC7	250 ml bottle	Bonner Analytical Testing Company
MoodryHVfloorRinsate005	3/27/2018	Moodry HV Floor Rinstate	NA	Floor Dust	CLP ICP-MS Metals	MH0AC8	250 ml bottle	Bonner Analytical Testing Company
MoodryHVFloor001	3/27/2018	Moodry-Gnd Floor Cafeteria	230	Floor Dust	CLP ICP-MS Metals	MH0AC9	250 ml bottle	Bonner Analytical Testing Company
MoodryHVFloor002	3/27/2018	Moodry-Gnd Floor Boys Locker Room	500	Floor Dust	CLP ICP-MS Metals	MH0AD0	250 ml bottle	Bonner Analytical Testing Company
MoodryHVFloor003	3/27/2018	Moodry-Gnd Floor IT Lab	50	Floor Dust	CLP ICP-MS Metals	MH0AD1	250 ml bottle	Bonner Analytical Testing Company
MoodryHVFloor004	3/27/2018	Moodry-1st Floor Stage	100	Floor Dust	CLP ICP-MS Metals	MH0AD2	250 ml bottle	Bonner Analytical Testing Company
MoodryHVFloor005	3/27/2018	Moodry-1st Floor Gym	210	Floor Dust	CLP ICP-MS Metals	MH0AD3	250 ml bottle	Bonner Analytical Testing Company
MoodryHVFloor006	3/27/2018	Moodry-1st Floor Hall	110	Floor Dust	CLP ICP-MS Metals	MH0AD4	250 ml bottle	Bonner Analytical Testing Company
MoodryHVFloor007	3/27/2018	Moodry-2nd Floor Rm 20	125	Floor Dust	CLP ICP-MS Metals	MH0AD5	250 ml bottle	Bonner Analytical Testing Company
MoodryHVFloor008	3/27/2018	Moodry-2nd Floor Rm 22	60	Floor Dust	CLP ICP-MS Metals	MH0AD6	250 ml bottle	Bonner Analytical Testing Company
MoodryHVFloor009	3/27/2018	Moodry-2nd Floor Rm 25	120	Floor Dust	CLP ICP-MS Metals	MH0AD7	250 ml bottle	Bonner Analytical Testing Company
MoodryHVFloor010	3/27/2018	Moodry-3rd Floor Rm 30	55	Floor Dust	CLP ICP-MS Metals	MH0AD8	250 ml bottle	Bonner Analytical Testing Company
MoodryHVFloor011	3/27/2018	Moodry-3rd Floor Rm 34	130	Floor Dust	CLP ICP-MS Metals	MH0AD9	250 ml bottle	Bonner Analytical Testing Company
MoodryHVFloor012	3/27/2018	Moodry-3rd Floor Hall	270	Floor Dust	CLP ICP-MS Metals	MH0AE0	250 ml bottle	Bonner Analytical Testing Company
MoodryHVFloor008D	3/27/2018	Moodry HV FloorField Duplicate (D)	65	Floor Dust	CLP ICP-MS Metals	MH0AE1	250 ml bottle	Bonner Analytical Testing Company
JSHighHVFlmat001	3/25/2018	JSHigh - Gnd Floor Main Door	12	Floor Dust	CLP ICP-MS Metals	MH0AE2	250 ml bottle	Bonner Analytical Testing Company
JSHighHVFlmat002	3/25/2018	JSHigh Gnd Floor Cafeteria Door	12	Floor Dust	CLP ICP-MS Metals	MH0AE3	250 ml bottle	Bonner Analytical Testing Company
JSHighHVFlmat003	3/25/2018	JSHigh - Gnd Floor door by BandRm	6	Floor Dust	CLP ICP-MS Metals	MH0AE4	250 ml bottle	Bonner Analytical Testing Company
JSHighHVFImatRinsate006	3/25/2018	JS High Floor Mat Rinsate	NA	Floor Dust	CLP ICP-MS Metals	MH0AE5	250 ml bottle	Bonner Analytical Testing Company
JSHighHVFloorRinsate007	3/25/2018	JSHigh HV Floor Rinstate	NA	Floor Dust	CLP ICP-MS Metals	MH0AE6	250 ml bottle	Bonner Analytical Testing Company
JSHighHVFloor001	3/25/2018	JSHigh-Gnd Floor Cafeteria	500	Floor Dust	CLP ICP-MS Metals	MH0AE7	250 ml bottle	Bonner Analytical Testing Company
JSHighHVFloor002	3/25/2018	JSHigh-Gnd Floor Theater	30	Floor Dust	CLP ICP-MS Metals	MH0AE8	250 ml bottle	Bonner Analytical Testing Company
JSHighHVFloor003	3/25/2018	JSHigh-Gnd Floor Band Room	90	Floor Dust	CLP ICP-MS Metals	MH0AE9	250 ml bottle	Bonner Analytical Testing Company
JSHighHVFloor004	3/25/2018	JSHigh-Gnd Floor Hall	19	Floor Dust	CLP ICP-MS Metals	MH0AF0	250 ml bottle	Bonner Analytical Testing Company
JSHighHVFloor005	3/25/2018	JSHigh-1st Floor Rm 201	65	Floor Dust	CLP ICP-MS Metals	MH0AF1	250 ml bottle	Bonner Analytical Testing Company
JSHighHVFloor006	3/25/2018	JSHigh-1st Floor Rm 207	98	Floor Dust	CLP ICP-MS Metals	MH0AF2	250 ml bottle	Bonner Analytical Testing Company
JSHighHVFloor007	3/25/2018	JSHigh-1st Floor Library	45	Floor Dust	CLP ICP-MS Metals	MH0AF3	250 ml bottle	Bonner Analytical Testing Company
JSHighHVFloor008	3/25/2018	JSHigh-1st Floor Hall	190	Floor Dust	CLP ICP-MS Metals	MH0AF4	250 ml bottle	Bonner Analytical Testing Company

Table 1
Summary of Floor Dust Sample Locations, Descriptions, Sample Identification, and Analytical Parameters

		January of Froor Buot Gampie Ecountries	0, = 00011	peroo, oap.	5 10011011100010111, 01	10171110171101		
JSHighHVFloor009	3/25/2018	JSHigh-2nd Floor Rm 301	150	Floor Dust	CLP ICP-MS Metals	MH0AF5	250 ml bottle	Bonner Analytical Testing Company
JSHighHVFloor010	3/25/2018	JSHigh-2nd Floor Rm 308	85	Floor Dust	CLP ICP-MS Metals	MH0AF6	250 ml bottle	Bonner Analytical Testing Company
JSHighHVFloor011	3/25/2018	JSHigh-2nd Floor Rm 312	120	Floor Dust	CLP ICP-MS Metals	MH0AF7	250 ml bottle	Bonner Analytical Testing Company
JSHighHVFloor012	3/25/2018	JSHigh-2nd Floor Hall	104	Floor Dust	CLP ICP-MS Metals	MH0AF8	250 ml bottle	Bonner Analytical Testing Company
JSHighHVFlmat003D	3/25/2018	JSHigh HV FloorField Duplicate (D)	6	Floor Dust	CLP ICP-MS Metals	MH0AF9	250 ml bottle	Bonner Analytical Testing Company
JSHighHVFloor002 D	3/25/2018	JSHigh HV FloorField Duplicate (D)	30	Floor Dust	CLP ICP-MS Metals	MH0AG0	250 ml bottle	Bonner Analytical Testing Company
MemGymHVFlmat001	3/26/2018	Memorial Gym Gnd Floor Main Door	12	Floor Dust	CLP ICP-MS Metals	MH0AG1	250 ml bottle	Bonner Analytical Testing Company
MemGymHVFlmatRinsate008	3/26/2018	Memorial Gym Floor Mat Rinsate	NA	Floor Dust	CLP ICP-MS Metals	MH0AG2	250 ml bottle	Bonner Analytical Testing Company
MemGymHVSFloorRinsate009	3/26/2018	MemGym HV Floor Rinstate	NA	Floor Dust	CLP ICP-MS Metals	MH0AG3	250 ml bottle	Bonner Analytical Testing Company
MemGymHVFloor001	3/26/2018	MemGym-Gnd Floor S. Office	50	Floor Dust	CLP ICP-MS Metals	MH0AG4	250 ml bottle	Bonner Analytical Testing Company
MemGymHVFloor002	3/26/2018	MemGym-Gnd Floor Locker Rm A	350	Floor Dust	CLP ICP-MS Metals	MH0AG5	250 ml bottle	Bonner Analytical Testing Company
MemGymHVFloor003	3/26/2018	MemGym-1st Floor Ball Court	180	Floor Dust	CLP ICP-MS Metals	MH0AG6	250 ml bottle	Bonner Analytical Testing Company
HVSandBlank	3/24/2018	Anaconda Schools	NA	silica beads	CLP ICP-MS Metals	MH0AG7	250 mL bottle	Bonner Analytical Testing Company
HeadstHVFloorLounge	3/24/2018	Head Start 1st Floor Lounge	129	Floor Dust	CLP ICP-MS Metals	MH0AG8	250 ml bottle	Bonner Analytical Testing Company
MoodryHVFlmatRinsate004	3/27/2018	Moodry HV Floor Mat Rinsate	NA	Floor Dust	CLP ICP-MS Metals	MH0AG9	250 ml bottle	Bonner Analytical Testing Company
MoodryOgrab004	3/27/2018	Moodry - Paint chips in Boiler Rm	NA	Lead Paint	As, Pb	NA	Quart Ziplock	Katahdin Analytical Services
AdminOgrab001	3/27/2018	Administration - black material on ground outside of building	NA	Exterior	As, Pb	NA	Quart Ziplock	Katahdin Analytical Services

Table 2
Summary of Floor Dust Samples with Lab Flags, Data Validation Qualifiers, and Enforcement and Screening Assessment

			ARSE	NIC	Descriptor Code	Utilization Category	LEAD	Descriptor Code	Utilization Category
School	Location	Sample Name	mg/kg	DV			mg/kg DV		
Head Start	Head Start - 1st Floor Back Door	HEADSTHVFLMAT002	36.8	J	E	E	33.7		E
Head Start	Head Start - 1st Floor Children's Restroom	HEADSTHVFLOOR007	3.7	J	E	E	34.3		E
Head Start	Head Start - 1st Floor Classroom 3	HEADSTHVFLOOR005	8.9	J	Е	E	22.8		E
Head Start	Head Start - 1st Floor Classroom 4	HEADSTHVFLOOR006	9.7	J	E	E	24.2		E
Head Start	Head Start - 1st Floor Hallway	HEADSTHVFLOOR004	21.7	J	E	E	42.6		E
Head Start	Head Start - 1st Floor Lounge	HEADSTHVFLOORLOUNGE	13.6	J	S	E	27.4		E
Head Start	Head Start - Gnd Classroom 1	HEADSTHVFLOOR002	19.8	J	E	Е	40.8		E
Head Start	Head Start - Gnd Classroom 2	HEADSTHVFLOOR003	14.5	J	E	E	28.1	100	E
Head Start	Head Start - Gnd Front Door	HEADSTHVFLMAT001	32.7	J	Е	E	51.2		E
Head Start	Head Start - Gnd Hallway	HEADSTHVFLOOR001	15.1	J	E	E	32		E
Head Start	Head Start- HV Floor Duplicate (D)	HEADSTHVFLMAT002D	37.3	J	E	E	34.1		E
JS High School		JSHIGHHVFLMAT003	25.1	J	S	E	53		E
JS High School		JSHIGHHVFLMAT001	22.4	J	S	E	72.2		E
JS High School	JSHigh- HV Flmat Field Duplicate (D)	JSHIGHHVFLMAT003D	22.2	J	S	E	48		E
JS High School		JSHIGHHVFLOOR002D	23.6	J	S	E	98.4		E
JS High School	JSHigh-1st Floor Hall	JSHIGHHVFLOOR008	15.5	J	S	E	53.6		E
JS High School	JSHigh-1st Floor Library	JSHIGHHVFLOOR007	30	J	S	E	111		E
	JSHigh-1st Floor Rm 201	JSHIGHHVFLOOR005	13	J	S	E	41.9		E
JS High School	JSHigh-1st Floor Rm 207	JSHIGHHVFLOOR006	17.1	J	S	E	118		E
JS High School	JSHigh-2nd Floor Hall	JSHIGHHVFLOOR012	12.5	J	S	E	71		E
JS High School	JSHigh-2nd Floor Rm 301	JSHIGHHVFLOOR009	11.2	J	S	E	77.4		E
JS High School	JSHigh-2nd Floor Rm 308	JSHIGHHVFLOOR010	14.3	J	S	E	120		E
JS High School	JSHigh-2nd Floor Rm 312	JSHIGHHVFLOOR011	10.7	J	S	E	134		E
JS High School	JSHigh-Gnd Floor Band Room	JSHIGHHVFLOOR003	22	J	S	Е	109		E
JS High School	JSHigh-Gnd Floor Cafeteria	JSHIGHHVFLOOR001	11.8	J	S	Е	33.7		E
JS High School	JSHigh-Gnd Floor Cafeteria Door	JSHIGHHVFLMAT002	21.3	J	S	E	50.7		E
JS High School	JSHigh-Gnd Floor Hall	JSHIGHHVFLOOR004	15.4	J	S	E	58.8		E
JS High School		JSHIGHHVFLOOR002	22.5	J	S	E	78.8		E
Lincoln School	Lincoln - Floor Duplicate (D)	LINCOLNHVFLOOR003D	24.7	J-	S	E	42.2		E
Lincoln School	Lincoln-1st Floor by RM11 Door	LINCOLNHVFLMAT004	30.1	J	E	E	41.8		E
Lincoln School	Lincoln-1st Floor Hall	LINCOLNHVFLOOR002	19.2	J	E	Е	32.2		Е
Lincoln School	Lincoln-1st Floor Library	LINCOLNHVFLOOR003	24.1	J	Е	E	44.5		E
Lincoln School	Lincoln-1st Floor Main Door	LINCOLNHVFLMAT001	30.4	J	Е	E	71.3		E
Lincoln School	Lincoln-1st Floor Playground Door	LINCOLNHVFLMAT002	29.4	J	E	E	34.9		E
Lincoln School	Lincoln-1st Floor Rm11	LINCOLNHVFLOOR001	26.3	J	E	E	41.4		E
Lincoln School	Lincoln-2nd Floor Hall	LINCOLNHVFLOOR006	15.4	J-	S	Е	30.7		E
Lincoln School	Lincoln-2nd Floor Rm23	LINCOLNHVFLOOR004	29.1	J-	S	Е	111		E

Table 2
Summary of Floor Dust Samples with Lab Flags, Data Validation Qualifiers, and Enforcement and Screening Assessment

			ARSE	NIC	Descriptor Code	Utilization Category	LEAD	Descriptor Code	Utilization Category
School	Location	Sample Name	mg/kg	DV			mg/kg DV		
Lincoln School	Lincoln-2nd Floor Staff Lounge	LINCOLNHVFLOOR005	19	J-	S	E	38.5		E
Lincoln School	Lincoln-Ada Gym	LINCOLNHVFLMAT003	25.7	J	E	E	44.7		E
Lincoln School	Lincoln-Ada Gym Ball Court	LINCOLNHVFLOOR008	13.6	J-	S	E	28.3		E
Lincoln School	Lincoln-Ada Gym Stage/Classroom	LINCOLNHVFLOOR007	28.5	J-	S	E	53.7		E
Memorial Gym	MemGym-1st Floor Ball Court	MEMGYMHVFLOOR003	15	J	S	E	78		E
Memorial Gym	MemGym-Gnd Floor Locker Rm A	MEMGYMHVFLOOR002	14.1	J	S	E	93.7		E
Memorial Gym	MemGym-Gnd Floor Main Door	MEMGYMHVFLMAT001	28.8	J	S	E	54.9		E
Memorial Gym	MemGym-Gnd Floor S. Office	MEMGYMHVFLOOR001	28.9	J	S	E	264		E
Moodry School	Moodry-1st Floor Gym	MOODRYHVFLOOR005	21.7	J-	S	E	47.8		E
Moodry School	Moodry-1st Floor Hall	MOODRYHVFLOOR006	15.1	J-	S	E	63.7		E
Moodry School	Moodry-1st Floor Main Door	MOODRYHVFLMAT001	14.7	J-	S	E	24.6		E
Moodry School	Moodry-1st Floor South Door	MOODRYHVFLMAT002	29.4	J-	S	E	47.8		E
Moodry School	Moodry-1st Floor Stage	MOODRYHVFLOOR004	17.1	J-	S	E	100		E
Moodry School	Moodry-2nd Floor Rm 20	MOODRYHVFLOOR007	13.2	J-	S	E	46.4		E
Moodry School	Moodry-2nd Floor Rm 22	MOODRYHVFLOOR008	22.8	J-	S	Е	88.4		E
Moodry School	Moodry-2nd Floor Rm 25	MOODRYHVFLOOR009	10.2	J-	S	E	53.5		E
Moodry School	Moodry-3rd Floor Hall	MOODRYHVFLOOR012	15.6	J	S	E	34.9		E
Moodry School	Moodry-3rd Floor Rm 30	MOODRYHVFLOOR010	22.3	J-	S	E	54.9		E
Moodry School	Moodry-3rd Floor Rm 34	MOODRYHVFLOOR011	15	J-	S	E	52		E
Moodry School	Moodry-Gnd Floor Boys Locker Room	MOODRYHVFLOOR002	14.1	J-	S	E	64.5		E
Moodry School	Moodry-Gnd Floor Cafeteria	MOODRYHVFLOOR001	13.4	J-	S	E	45.3		E
Moodry School	Moodry-Gnd Floor IT Lab	MOODRYHVFLOOR003	16.3	J-	S	E	49.6		E
Moodry School	Moodry-HV Floor Field Duplicate (D)	MOODRYHVFLOOR008D	26.4	J	S	E	82.8		E

mg/kg = milligram per kilogram

DV = data validation qualifier

UJ = The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

J = The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

J- = The result is an estimated quantity, but the result may be biased low.

Descriptor Code for Qualification

E = Inductively Coupled Plasma Serial Dilution Criteria

S = Matrix Spike Criteria

Utilization Category

S = Screening quality

Table 3
Summary of Floor Dust Sample Duplicate Sampling Results

School	Head	Start			He	ead Start					
Location Sample Name Sample Type		Back Door /FLMAT002 N	Descriptor Code	Utilization Category	1	Head Start- HV Floor Duplicate HEADSTHVFLMAT002D		· Code		Utilization Category	Relative Percent Difference
	Result				Result						
	mg/kg	DV			mg/kg	DV					
Arsenic	36.8	J	E	S	37.3	J	E	S	1.35		
Lead	33.7			E	34.1			E	1.18		

mg/kg = milligram per kilogram

DV = data validation qualifier

UJ = The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

J = The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

J- = The result is an estimated quantity, but the result may be biased low.

Descriptor Code for Qualification

E = Inductively Coupled Plasma Serial Dilution Criteria

S = Matrix Spike Criteria

Utilization Category

S = Screening quality

Table 3
Summary of Floor Dust Sample Duplicate Sampling Results

School Location Sample Name Sample Type	JSHigh-Gnd JSHIGHHV	School Floor Theater FLOOR002 N	Descriptor Code	Utilization Category	JSHigh- Field Dup JSHIGHHVF	JS High School JSHigh- HV Floor Field Duplicate (D) JSHIGHHVFLOOR002D FD		Field Duplicate (D) JSHIGHHVFLOOR002D		JSHigh- HV Floor Field Duplicate (D) JSHIGHHVFLOOR002D Descriptor Utilization Code Category		Utilization Category	Relative Percent Difference
	Result mg/kg	DV			Result mg/kg	DV							
Arsenic	22.5	J	S	S	23.6	J	S		4.77				
Lead	78.8			E	98.4				22.12				

mg/kg = milligram per kilogram

DV = data validation qualifier

UJ = The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

J = The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

J- = The result is an estimated quantity, but the result may be biased low.

Descriptor Code for Qualification

E = Inductively Coupled Plasma Serial Dilution Criteria

S = Matrix Spike Criteria

Utilization Category

S = Screening quality

Table 3
Summary of Floor Dust Sample Duplicate Sampling Results

School Location Sample Name	JSHigh - Gnd Floor door Descriptor Utilization Shigh- HV Flmat Code Category Field Duplicate (D)		HV Flmat plicate (D)	Descriptor Code	Utilization Category	Relative Percent Difference			
Sample Type		VIEWAT003				FD			
	Result				Result				
	mg/kg	DV			mg/kg	DV			
Arsenic	25.1	J	S	S	22.2	J	S	S	12.26
Lead	53			E	48			E	9.90

mg/kg = milligram per kilogram

DV = data validation qualifier

UJ = The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

J = The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

J- = The result is an estimated quantity, but the result may be biased low.

Descriptor Code for Qualification

E = Inductively Coupled Plasma Serial Dilution Criteria

S = Matrix Spike Criteria

Utilization Category

S = Screening quality

Table 3
Summary of Floor Dust Sample Duplicate Sampling Results

School	Lincoln	School			Lincoln	Lincoln School			
Location Sample Name Sample Type		Floor Library VFLOOR003 N	Descriptor Code	Utilization Category	Lincoln - Floor Duplicate (D) LINCOLNHVFLOOR003D FD		Descriptor Code	Utilization Category	Relative Percent Difference
	Result				Result				
	mg/kg	DV			mg/kg	DV			
Arsenic	24.1	J	S	S	24.7	J-	S	S	2.46
Lead	44.5			E	42.2			E	5.31

mg/kg = milligram per kilogram

DV = data validation qualifier

UJ = The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

J = The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

J- = The result is an estimated quantity, but the result may be biased low.

Descriptor Code for Qualification

E = Inductively Coupled Plasma Serial Dilution Criteria

S = Matrix Spike Criteria

Utilization Category

S = Screening quality

Table 3
Summary of Floor Dust Sample Duplicate Sampling Results

School	Moodry	School			N	Moodry School			
Location Sample Name Sample Type	MOODRYH	Floor Rm 22 VFLOOR008 N	Descriptor Code	Utilization Category	Moodry-HV Floor Field Duplicate (D) MOODRYHVFLOOR008D FD		Descriptor Code	Utilization Category	Relative Percent Difference
	Result				Result				
	mg/kg	DV			mg/kg	DV			
Arsenic	22.8	J-	S	S	26.4	J	S	S	14.63
Lead	88.4			E	82.8			E	6.54

mg/kg = milligram per kilogram

DV = data validation qualifier

UJ = The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

J = The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

J- = The result is an estimated quantity, but the result may be biased low.

Descriptor Code for Qualification

E = Inductively Coupled Plasma Serial Dilution Criteria

S = Matrix Spike Criteria

Utilization Category

S = Screening quality

Table 4
Summary of Floor Dust Rinsate Blank Analysis

School Location Sample Name Sample Type	Anaconda Schools HVSANDBLANK		Descriptor Code	Utilization Category	Head Start - F	id Start Toor Mat Rinsate .MATRINSATE001 RB	Descriptor Code	Utilization Category
	Result mg/kg	DV			Result mg/kg	DV		
Arsenic	0.96	UJ	S	S	0.98	UJ	E	S
Lead*	0.24	J		Е	0.29	J		E

mg/kg = milligram per kilogram

DV = data validation qualifier

UJ = The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

J = The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

Descriptor Code for Qualification

E = Inductively Coupled Plasma Serial Dilution Criteria

S = Matrix Spike Criteria

Utilization Category

S = Screening quality

^{*} J qualifiers were applied by the laboratory based on results being between the method detection limit and the contract required quantitation limit; however, no descriptor code required.

Table 4
Summary of Floor Dust Rinsate Blank Analysis

School Location Sample Name Sample Type	JS HighFloor Mat Rinsate JSHIGHHVFLMATRINSATE006		Descriptor Code	Utilization Category	JSHigh- HV I JSHIGHHVFLO	n School Floor Rinstate ORRINSATE007 RB	Descriptor Code	Utilization Category
	Result mg/kg	DV			Result mg/kg	DV		
Arsenic	0.94	UJ	S	S	0.98	UJ	S	S
Lead*	0.94	U		E	0.98	U		E

mg/kg = milligram per kilogram

DV = data validation qualifier

UJ = The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

J = The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

Descriptor Code for Qualification

E = Inductively Coupled Plasma Serial Dilution Criteria

S = Matrix Spike Criteria

Utilization Category

S = Screening quality

^{*} J qualifiers were applied by the laboratory based on results being between the method detection limit and the contract required quantitation limit; however, no descriptor code required.

Table 4
Summary of Floor Dust Rinsate Blank Analysis

School Location	1		Descriptor	Utilization		oln School / Floor Rinstate	Descriptor	Utilization
1 1	LINCOLNHVFLMATRINSATE002		•	Category	LINCOLNHVFLOORRINSATE003		Code	Category
Sample Type	mple Type RB					RB		
	Result				Result			
	mg/kg	DV			mg/kg	DV		
Arsenic	0.96	UJ	Е	S	0.94	UJ	E	S
Lead*	1.5			E	1.3			E

mg/kg = milligram per kilogram

DV = data validation qualifier

UJ = The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

J = The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

Descriptor Code for Qualification

E = Inductively Coupled Plasma Serial Dilution Criteria

S = Matrix Spike Criteria

Utilization Category

S = Screening quality

^{*} J qualifiers were applied by the laboratory based on results being between the method detection limit and the contract required quantitation limit; however, no descriptor code required.

Table 4
Summary of Floor Dust Rinsate Blank Analysis

School	Memo	Memorial Gym			Mem	orial Gym		
Location	MemGym-Floor Mat Rinsate		Descriptor	Utilization	MemGym-HV Floor Rinstate		Descriptor	Utilization
Sample Name	MEMGYMHVFLMATRINSATE008		Code	Category	MEMGYMHVF	LOORRINSATE009	Code	Category
Sample Type	<u> </u>					RB		
	Result	- 1			Result			
	mg/kg	DV			mg/kg	DV		
Arsenic	0.96	UJ	S	S	0.98	UJ	S	S
Lead*	0.22	J		E	0.98	U		Е

mg/kg = milligram per kilogram

DV = data validation qualifier

UJ = The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

J = The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

Descriptor Code for Qualification

E = Inductively Coupled Plasma Serial Dilution Criteria

S = Matrix Spike Criteria

Utilization Category

S = Screening quality

^{*} J qualifiers were applied by the laboratory based on results being between the method detection limit and the contract required quantitation limit; however, no descriptor code required.

Table 4
Summary of Floor Dust Rinsate Blank Analysis

School Location Sample Name Sample Type	Moodry-Floor Mat Rinsate MOODRYHVFLMATRINSATE004		Descriptor Code	Utilization Category	Moodry-HV MOODRYHVFL	ry Šchool Floor Rinstate .OORRINSATE005 RB	Descriptor Code	Utilization Category
- Campio Typo	Result mg/kg	DV			Result mg/kg	DV		
Arsenic	0.98	UJ	S	S	0.98	UJ	S	S
Lead*	0.14	J		Е	0.25	J		E

mg/kg = milligram per kilogram

DV = data validation qualifier

UJ = The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

J = The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

Descriptor Code for Qualification

E = Inductively Coupled Plasma Serial Dilution Criteria

S = Matrix Spike Criteria

Utilization Category

S = Screening quality

^{*} J qualifiers were applied by the laboratory based on results being between the method detection limit and the contract required quantitation limit; however, no descriptor code required.

Table 5
Summary of Personal Air Sampling Results

						ENIC	Utilization Category		:AD	Utilization Category
School	Location	Sample Name	Sample Type	Unit	Result	DV		Result	DV	
	PERSAIRLOTBLANK	PERSAIRLOTBLANK	EB	ug/flt	0.5	U	E	0.1	U	E
Head Start	HEADST20	HEADST20	N	ug/m³	0.74	U	E	0.15	U	E
Head Start	HEADST21	HEADST21	N	ug/m³	0.76	U	E	0.15	U	E
Head Start	HEADST23	HEADST23	N	ug/m³	0.5	U	E	0.1	U	E
Head Start	HEADST24	HEADST24	N	ug/m³	0.75	U	Е	0.15	U	E
Head Start	HEADST25	HEADST25	N	ug/m³	0.5	U	E	0.1	U	E
Head Start	HEADSTPERFIELDBLANK	HEADSTPERFIELDBLANK	FB	ug/flt	0.5	U	E	0.1	U	E
JS High School	JSHIGH20	JSHIGH20	N	ug/m³	0.59	U	E	0.12	U	E
JS High School	JSHIGH21	JSHIGH21	N	ug/m³	0.57	U	E	0.11	U	E
JS High School	JSHIGH23	JSHIGH23	N	ug/m³	0.6	U	E	0.12	U	E
JS High School	JSHIGH24	JSHIGH24	N	ug/m³	0.6	U	Е	0.12	U	E
JS High School	JSHIGH25	JSHIGH25	N	ug/m³	0.6	U	E	0.12	U	E
JS High School	JSHIGHPERSFIELDBLANK	JSHIGHPERSFIELDBLANK	FB	ug/flt	0.5	U	E	0.1	U	E
Lincoln School	LINCOLN20	LINCOLN20	N	ug/m³	0.87	U	Е	0.17	U	E
Lincoln School	LINCOLN21	LINCOLN21	N	ug/m³	0.91	U	E	0.18	U	E
Lincoln School	LINCOLN23	LINCOLN23	N	ug/m³	0.89	U	E	0.18	U	E
Lincoln School	LINCOLN24	LINCOLN24	N	ug/m³	0.9	U	E	0.18	U	E
Lincoln School	LINCOLN25	LINCOLN25	N	ug/m³	0.86	U	E	0.17	U	E
Lincoln School	LINCOLNPERSFIELDBLANK	LINCOLNPERSFIELDBLANK	FB	ug/flt	0.5	U	E	0.1	U	E
Memorial Gym	MEMGYM20	MEMGYM20	N	ug/m³	1.9	U	E	0.39	U	E
Memorial Gym	MEMGYM21	MEMGYM21	N	ug/m ³	2.1	U	E	0.41	U	E
Memorial Gym	MEMGYM23	MEMGYM23	N	ug/m³	2	U	E	0.4	U	E
Memorial Gym	MEMGYM24	MEMGYM24	N	ug/m³	2	U	E	0.4	U	E
Memorial Gym	MEMGYM25	MEMGYM25	N	ug/m ³	1.9	U	E	0.39	U	E
Memorial Gym	MEMGYMPERSFIELDBLANK	MEMGYMPERSFIELDBLANK	FB	ug/flt	0.5	U	E	0.1	U	E
Moodry School	MOODRY20	MOODRY20	N	ug/m³	0.56	U	Е	1.34		E
Moodry School	MOODRY21	MOODRY21	N	ug/m³	0.69	U	E	0.14	U	E
Moodry School	MOODRY23	MOODRY23	N	ug/m³	0.56	U	Е	0.11	U	E
Moodry School	MOODRY24	MOODRY24	N	ug/m³	0.7	U	Е	0.14	U	E
Moodry School	MOODRY25	MOODRY25	N	ug/m³	0.55	U	E	0.11	U	E
Moodry School	MOODRYPERSFIELDBLANK	MOODRYPERSFIELDBLANK	FB	ug/flt	0.5	U	Е	0.1	U	E

Notes:

ug/m³ = microgram per meter cubed

ug/flt = microgram per filter

U = The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.

S = Screening quality

N = Normal sample

FB = Field Blank

Table 6
Summary of Opportunistic Solid Media Samples

			Arsenic			Lead		
Sample #	Sample Date	Location	mg/kg	Q	ES	mg/kg	Q	ES
MoodryOgrab004	3/27/2018	 Moodry - Paint chips in Boiler Rm	5.7		S	192		S
AdminOgrab001	3/27/2018	Administration - black material on ground outside of building	8.6		S	19.9		S

Appendix A

Data Usability and Assessment Review





Draft Data Usability Assessment Review

Interior Dust Investigation

Anaconda Schools

May 2018





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Attachments

Attachment 1 Data Validation Reports



Acronyms

%D percent difference

%R percent recovery

AES atomic emission spectrometer

CFRSSI Clark Fork River Superfund Site Investigation

COC chain-of-custody

CRQL contract required quantitation limit

DM/DVP Data Management/Data Validation Plan

DQI data quality indicators

DQO data quality objectives

DUAR data usability and assessment review

EPA U.S. Environmental Protection Agency

HVS3 High Volume Small Surface Sampler

ICP Inductively Coupled Plasma

LCS laboratory control sample

MDL method detection limit

MS matrix spike

PARCCS precision, accuracy, representativeness, comparability, completeness, and

sensitivity

QA Quality assurance

QAPP Quality Assurance Project Plan

QC Quality control

RAC Remedial Action Contract

RL reporting limits

RPD Relative percent difference

RSD Relative standard deviation

SAP Sampling and Analysis Plan

SDG sample delivery group



Data Usability and Assessment Review

The purpose of this data usability and assessment review (DUAR) is to summarize the data validation and determine whether the sample results meet the data quality objectives (DQOs) outlined in the Sampling and Analysis Plan (SAP)/Quality Assurance Project Plan (QAPP), Interior Dust Sampling of Anaconda Schools, Anaconda-Deer Lodge County, Montana (CDM Smith 2018a) and the Sampling and Analysis Plan/Quality Assurance Project Plan, Interior Dust Sampling of Anaconda Head Start, Anaconda Smelter Superfund Site, Rev. 1 (CDM Smith 2018b). Data validation was performed on dust samples collected at four school buildings and the Anaconda Head Start located in the Anaconda Smelter Superfund Site in Anaconda-Deer Lodge County, Montana.

Dust samples were collected by CDM Smith under its Response Action Contract (RAC) with U.S. Environmental Protection Agency (EPA) for Region VIII (EPA Contract No. EP-W-05-049). Interior dust sampling activities were performed between March 24 and March 27, 2018. Two laboratories, Bonner Analytical Testing, Hattiesburg, Mississippi and Katahdin Analytical Services, Scarborough, Maine were used for sample analysis. All data were validated. Data validation was performed in accordance with the specific analytical methods, the site-specific SAP/QAPP (CDM Smith 2018), and the EPA National Functional Guidelines for Inorganic Superfund Methods Data Review (January 2017).

1.1 Usability Summary

For this DUAR, five data packages containing 55 dust samples, nine rinsate blank samples, one sand blank, five field duplicates, 25 personal air monitoring samples and six associated lot and field blanks were validated as required by the SAP/QAPP (CDM Smith 2018a/b). No field duplicates were collected for the personal air monitoring samples. Samples were collected and analyzed in accordance with the applicable SAP/QAPP (CDM Smith 2018a/b).

Data collected during this field investigation and validated for this DUAR are usable as reported. Applicable data validation qualifiers were added if required. Data utilization categories have also been applied to the samples as discussed in Section 4. No sample results were rejected. Specific details are provided in the validation reports presented in Attachment 1 and Section 5 of this report. A summary of the validation is presented in the following sections.



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Quality Assurance Objectives

Quality assurance (QA) objectives for measurement data are expressed in terms of precision, accuracy, representativeness, comparability, completeness, and sensitivity (PARCCS). The QA objectives provide a mechanism for ongoing quality control (QC) and evaluating and measuring data quality throughout the project.

A review of the collected data is necessary to determine if data measurement objectives established in the SAP/QAPP (CDM Smith 2018) have been met. In general, the following data measurement objectives were considered:

- Achievement of analytical method and reporting limit requirements
- Adherence to and achievement of appropriate laboratory analytical QC requirements
- Achievement of required measurement performance criteria for data quality indicators (DQIs) PARCCS
- Adherence to sampling and sample handling procedures
- Adherence to the sampling design and deviations documented on field change notifications

The data validation review of the QA objectives verifies that the collected data are of sufficient quality to support their intended use.



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Field and Laboratory Quality Assurance Activities

CDM Smith completed sampling activities in accordance with the approved SAP/QAPP (CDM Smith 2018a/b). Samples were collected between March 24 and March 27, 2018. The following is a summary of the number of samples collected and the dates on which the sampling events occurred:

March 24 & March 26, 2018 – SDG MH0AA7
16 Dust Samples
1 Duplicate Sample
3 Rinsate Blank Samples
March 24, March 25 & March 26, 2018 – SDG MH0AG0
6 Dust Samples
1 Duplicate Sample
3 Rinsate Blank Samples
March 25 & March 27, 2018 – SDG MH0AE0
16 Dust Samples
2 Duplicate Samples
2 Rinsate Blank Samples
March 26 & March 27, 2018 – SDG MH0AC0
18 Dust Samples
1 Duplicate Sample
1 Rinsate Blank Sample
March 24 through March 27, 2018 – SDG SL2694
25 Air Monitoring Samples
5 Field Blank Samples
1 Lot Blank

SDG – sample delivery group

All samples were received intact with proper chain-of-custody (COC) documentation at Bonner Analytical Testing and Katahdin Analytical Laboratories. Sample identification was accurately documented by the laboratory. The sample preparation and analyses were conducted within the method-specified holding times.

The SAP/QAPP (CDM Smith 2018a/b) defined the procedures to be followed and the data quality requirements for the field sampling events.

3.1 Deviations from Field Procedures

No major deviations from field procedures, COCs, or laboratory data package requirements were reported during this sampling investigation.



3.2 Field Quality Assurance/Quality Control

Five field duplicate samples were collected for this sampling event. The QC sample collection frequency satisfies the minimum requirements outlined in the project SAP/QAPP (CDM Smith 2018a/b).

Field QA/QC objectives were accomplished through the use of appropriate sampling techniques and collection of the required QC samples at the required frequencies.

3.3 Laboratory Quality Assurance/Quality Control

Analytical QA/QC was assessed by laboratory QC checks, method blanks, sample custody tracking, sample preservation, adherence to holding times, laboratory control sample (LCS), matrix spike (MS) and calibration recoveries, serial dilutions, ICP interference checks, and other applicable QC parameters. As presented in the data validation reports in Attachment 1 of this report, the laboratory QC sample criteria met project requirements with the appropriate qualifiers applied. All data are considered usable.

3.3.1 Laboratory Methods

Samples were analyzed using a modified method ISM02.4 metals analysis: ICP-AES Analysis of Dust samples collected with a High Volume Small Surface Sampler (HVS3) vacuum and sieved by the laboratory. Method 6020A was used for the personal air filter samples. The methods used met project objectives.



Data Validation Procedures

Data were validated and reviewed by qualified CDM Smith data validators not associated with project sampling activities. The data validation was performed in accordance with the EPA National Functional Guidelines for Inorganic Superfund Methods Data Review (January 2017). Validation reports were prepared and are presented in Attachment 1.

The following Sample Delivery Group (SDG) data packages were validated:

- EPA SDG MH0AA7
- EPA SDG MH0AG0
- EPA SDG MH0AE0
- EPA SDG MH0AC0
- Katahdin SDG SL2694

As part of the Clark Fork River Superfund Site Investigation (CFRSSI) Data Management/Data Validation Plan (DM/DVP) (ARCO 1992) and Addendum (ARCO 2000), sample results are also assigned a data utilization category. There are three data utilization categories identified in the CFRSSI DM/DVP. These include, enforcement quality data, screening quality data, and unusable data. Enforcement quality data meet all QA/QC and documentation requirements. Screening quality data do not meet the applicable QA/QC requirements and/or documentation requirements. Unusable data may result from inappropriate sampling, analysis, or documentation procedures. Data that has not been qualified, qualified as nondetect, and laboratory results between the method detection limit and method reporting limit qualified as estimated are considered enforcement level. Sample results that are qualified as estimated based on validation criteria are considered screening quality unless a reproducible matrix effect is identified during the validation process. In the case of the arsenic floor dust results with "J" or "J-" data validation qualifiers, a consistent, reproducible effect is evident in the pattern of qualifiers; therefore, these data can be categorized as enforcement quality. No sample results were rejected and all data are usable. All floor dust and air sampling data is considered to be enforcement quality.

Data was also reviewed for completeness in order to assign Level A/B review status which encompasses reviewing field logbook documentation and sample chain of custody forms. These reviews are provided with the individual data validation reports in Attachment 1.

Descriptor codes identifying why a sample result was qualified have also been applied to sample results if required.



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Data Quality Indicators

This section summarizes the validation performed and the overall quality of the data based on the PARCCS parameters. The validation report is provided in Attachment 1.

Achievement of the DQOs was determined by the use of DQIs. These DQIs for measurement data are expressed in terms of PARCCS. The DQIs provide a mechanism for ongoing control to evaluate and measure data quality throughout the project. These criteria are defined in Table 5-1 and in the sections below.

Table 5-1 DQIs and Corresponding QC Parameters

Data Quality Indicators	QC Parameters Evaluation in Data Review/Validation
Precision	Relative percent difference (RPD) values of: 1) Laboratory duplicates 2) Field duplicates
Accuracy/Bias	Percent recovery (%R) or percent difference (%D) values of: 1) Initial calibration verification %RSD 2) Continuing calibration verification %D 3) MS %R 4) LCS %R 5) ICP Interference Check Standards 6) ICP Serial Dilution 7) Initial Calibration %D Results of: 1) Instrument and calibration blanks 2) Method blanks
Representativeness	Results of all blanks Sample integrity (COC and sample receipt forms) Holding times
Comparability	Sample-specific reporting limits (RLs)/CRQLs Sample collection methods Laboratory analytical methods
Completeness	Data qualifiers Laboratory deliverables Requested/Reported valid results Field sample collection (primary and QC samples) Contract compliance (i.e., method and instrument QC within limits)
Sensitivity	Method RLs/CRQLs Adequacy of sample dilution



5.1 Precision

Precision is a quantitative term that estimates the reproducibility of a set of replicate measurements under a given set of conditions. It is defined as a measurement of mutual agreement between measurements of the same property and is expressed in terms of RPD between duplicate determinations.

RPD is calculated as follows:

RPD = absolute value $[(C1-C2)/\{(C1+C2)/2)\}] \times 100\%$

Where:

C1 = concentration of primary sample

C2 = concentration of duplicate sample

Field and analytical precision were determined from the review of the field duplicate and laboratory duplicate results. The duplicate sample results were compared by calculating their respective RPDs. The field duplicate samples were collected in the same manner as the original samples but were collected in separate, individual containers, given separate sample identifiers, and treated as unique samples by the laboratory.

For the field and laboratory duplicate RPD validation, a control limit of 35% RPD for soil/dust samples was used. Field and laboratory RPD results are summarized below:

SDG MH0AA7 (March 24 & March 26, 2018)

RPDs for field duplicate and laboratory duplicate samples were within the control limit of 35% for the dust samples.

SDG MH0AG0 (March 24 & March 25, 2018)

RPDs for field duplicate and laboratory duplicate samples were within the control limit of 35% for the dust samples.

SDG MH0AE0 (March 25 & March 27, 2018)

RPDs for field and laboratory duplicate samples were within the control limit of 35% for the dust samples.

SDG MH0AC0 (March 26 & March 27, 2018)

RPDs for field and laboratory duplicate samples were within the control limit of 35% for the dust samples.

SDG SL2694 (March 24 through March 27, 2018)

RPDs for laboratory duplicate samples were within the control limit of 35% for the dust samples.

GDW_I.

5.2 Accuracy

Accuracy is the degree of agreement of a measurement with an accepted reference or true value and is a measure of the bias in a system. Accuracy of the data was assessed by comparing LCS recovery, MS recovery, calibration recovery, Inductively Coupled Plasma (ICP) interferences, and by performing serial dilution checks during metals analyses. Accuracy is expressed as percent recovery, which was calculated by:

Percent Recovery = (Total Analyte Found - Analyte Originally Present) x 100Analyte Added

Analytical accuracy for the entire data collection activity is difficult to measure because several sources of error exist. Errors can be introduced by any of the following:

- Sampling procedure and duration of sampling
- Field contamination
- Sample preservation and handling
- Sample matrix
- Sample preparation
- Analytical techniques

Accuracy is maintained by adhering to the EPA method and approved field and analytical standard operating procedures.

Below is a summary of the accuracy parameters reviewed and the resulting qualifications for the for the data collected:

SDG MH0AA7 (March 24 & March 26, 2018)

- LCS %Rs were within criteria.
- MS %Rs were within criteria.
- Serial dilution results were within criteria except for arsenic. All arsenic results were qualified as estimated "J/UJ."
- The initial and continuing calibration verifications were within acceptable criteria.
- ICP interference checks were within acceptable criteria.

SDG MH0AG0 (March 24 & March 25, 2018)

- LCS %Rs were within criteria.
- MS %Rs were within criteria except for arsenic. All arsenic results were qualified as estimated "J/UJ."



- Serial dilution results were within criteria.
- The initial and continuing calibration verifications were within acceptable criteria.
- ICP interference checks were within acceptable criteria.

SDG MH0AE0 (March 25 & March 27, 2018)

- LCS %Rs were within criteria.
- MS %Rs were within criteria except for arsenic. All arsenic results were qualified as estimated biased low "J-/UJ."
- Serial dilution results were within criteria.
- The initial and continuing calibration verifications were within acceptable criteria.
- ICP interference checks were within acceptable criteria.

SDG MH0AC0 (March 26 & March 27, 2018)

- LCS %Rs were within criteria.
- MS %Rs were within criteria except for arsenic. All arsenic results were qualified as estimated biased low "J-/UJ."
- Serial dilution results were within criteria.
- The initial and continuing calibration verifications were within acceptable criteria.
- ICP interference checks were within acceptable criteria.

SDG SL2694 (March 24 through March 27, 2018)

- LCS and MS %Rs were within criteria.
- Serial dilution results were within criteria.
- The initial and continuing calibration verifications were within acceptable criteria.
- ICP interference checks were within acceptable criteria.

Sample preservation, handling, and holding times are additional measures of accuracy of the data. As discussed in Section 3, samples were analyzed within the appropriate holding times. The cooler temperatures for the dust samples were 24 degrees Centigrade. No qualification was required per the validation guidelines.

5.2.1 Blank Contamination

Field equipment blanks and laboratory method blanks are analyzed to identify possible sources of contamination. Contamination of a sample can be introduced by field sample collection



methods, sample handling, preparation, and/or analysis. The following sections discuss blank contamination validation actions.

SDG MH0AA7 (March 24 & March 26, 2018)

- Arsenic was detected in the laboratory preparation blank; however, no qualification was required as the negative blank result was greater than the negative contract required quantitation limit (CRQL).
- Lead was detected in the rinsate blank associated with the Lincoln and Head Start schools; no qualifications were required as sample results were greater than the CRQL or greater than ten times the CRQL.
- Laboratory calibration blanks were nondetect.

SDG MH0AG0 (March 24 & March 25, 2018)

- Laboratory preparation blanks were nondetect.
- Arsenic was detected in the continuing calibration blank. No qualifications were required as sample results were either nondetect or greater than the CRQL.
- Lead was detected in the rinsate blank associated with the Memorial School. No qualifications were required as sample results were either nondetect or greater than the CRQL.

SDG MH0AE0 (March 25 & March 27, 2018)

Laboratory preparation and calibration blanks, and associated equipment rinsate blank results were nondetect.

SDG MH0AC0 (March 26 & March 27, 2018)

- Laboratory preparation blank results were nondetect.
- Arsenic was detected in the continuing calibration blank. No qualifications were required as sample results were greater than the CRQL.
- Lead was detected in the rinsate blank associated with the Memorial School. No qualifications were required as sample results were either nondetect or greater than the CRQL.

SDG SL2694 (March 24 through March 27, 2018)

Lead was detected in the laboratory blanks as well as the field blank samples. Associated sample results were qualified as nondetect "U" for all samples except MOODRY20.



5.3 Representativeness

Representativeness is a qualitative term that expresses the degree to which the sample data accurately and precisely represent the environmental conditions corresponding to the location and depth interval of sample collection. Requirements and procedures for sample collection were designed to maximize sample representativeness.

Representativeness can be monitored by reviewing field documentation and/or by performing field audits. For this report, a detailed review was performed on the COC forms and field data collection forms. Appropriate laboratory QA/QC requirements were described in the SAP/QAPP (CDM Smith 2018a/b) and laboratory statement of work to ensure that the laboratory analytical results were representative of true field conditions.

Field sampling accuracy was attained through strict adherence to the sampling design and the approved SAP/QAPP (CDM Smith 2018) procedures and by using EPA-approved analytical methods for sample analyses. As a result, the data represents as near as possible the actual field conditions at the time of sampling.

Representativeness, as defined above, was met for the fieldwork and laboratory analyses. The data collected are suitable for a representative characterization of the project area.

5.4 Comparability

Comparability is a qualitative term that expresses the confidence with which a data set can be compared with another. Strict adherence to standard sample collection procedures, analytical detection limits, and analytical methods assures that data from like samples and sample conditions are comparable. This comparability is independent of laboratory personnel, data reviewers, or sampling personnel. Comparability criteria are met for the project if, based on data review, the sample collection and analytical procedures are determined to have been followed or defined to show that variations did not affect the values reported.

To ensure comparability of data generated for the site, standard sample collection procedures and EPA-approved analytical methods were followed by CDM Smith during collection activities. The sample analyses were performed by Bonner Analytical Testing and Katahdin Analytical Services using approved standard operating procedures. Utilizing such procedures and methods enables the current data to be comparable to future data sets generated with similar methods and units.

5.5 Completeness

Completeness of the field program is defined as the percentage of samples planned for collection as listed in the final work plan versus the actual number of samples collected during the field program (see equation A).

Completeness for acceptable data is defined as the percentage of acceptable data obtained judged to be valid versus the total quantity of data generated (see equation B). Acceptable data include both data that pass all the QC criteria (unqualified data) and data that may not pass all the QC criteria but had appropriate corrective actions taken (qualified but usable data).

ÇPNI.h

A. %Completeness =
$$Cx \frac{100}{n}$$

Where:

C = actual number of samples collected n = total number of samples planned

B. %Completeness =
$$Vx \frac{100}{n'}$$

Where:

V = number of measurements judged valid n' = total number of measurements made

The overall completeness goal for these sampling events was 90% for all project data.

All samples outlined in the SAP/QAPP (CDM Smith 2018a/b) were collected in the field as planned to meet specific sampling activity objectives. The completeness for the number of samples planned to be collected versus the number of samples collected was 100% for all analyses.

Analyses for the sampling event met the 90% completeness goal of acceptable data for the number of measurements judged to be valid versus the total number of measurements made.

One hundred percent of the data validated and reported are suitable for their intended use for site characterization. No results were rejected, and all data collected met the overall project objectives. All floor dust and air sample data are considered to be enforcement quality. The completeness goals for both the number of samples collected for all sampling events and the number of measurements judged to be valid were met.

The DQOs were achieved; the data reported are suitable for their intended use as stated in the SAP/QAPP (CDM Smith 2018a/b). The achievement of the completeness goals for the data provides sufficient data for project decisions.

5.6 Sensitivity

Sensitivity is related to the ability to compare analytical results with project-specific levels of interest such as delineation levels or action levels. Analytical quantitation limits for the various sample analytes should be below the level of interest to allow an effective comparison.

Detection Limits

The MDL study attempts to answer the question, "What is the minimum concentration of a substance that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero"? The study is based upon repetitive analysis of an interference-free sample spiked with a known amount of the target analyte. The MDL is a measure of the ability of the test procedure to generate a positive response for the target analyte in the absence of any other interferences from the sample.

The RL/CRQL is generally defined as the lowest concentration at which an analyte can be confidently reported in a sample and its concentration reported with a reasonable degree of



accuracy and precision. For samples that do not pose a particular matrix problem, the RL/CRQL is typically about three to five times higher than the MDL.

Laboratory results are reported according to rules that provide established certainty of detection and RLs/CRQLs. The result for an analyte is flagged with a "U" if that analyte was not detected or qualified with a "J" flag if associated QC results fall outside the appropriate DQIs. Additionally, if an analyte is present at a concentration between the MDL and the RL/CRQL, the analytical result is flagged with a "J," indicating an estimated quantity. Qualifying the result as an estimated concentration reflects increased uncertainty in the reported value.

The laboratory applied qualifiers to applicable sample results to identify those being reported as detected below the RL/CRQL. For each analyte, laboratory RLs/CRQLs were low enough to compare to the project criteria stated in the laboratory statement of work and the SAP/QAPP (CDM Smith 2018).



Assessment of Data Usability and Reconciliation with Work Plan Goals

One hundred percent of the data reported and validated in this DUAR are suitable for their intended use as stated in the SAP/QAPP (CDM Smith 2018). No sample results were rejected. All floor dust and air sample data are considered to be enforcement status.

The achievement of the completeness goals for the number of samples collected and the number of sample results acceptable for use provides sufficient quality data to support project decisions. Sample results that were qualified as estimated are usable for project decisions.



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References

- ARCO, 1992. Clark Fork River Superfund Site Investigations Data Management/Data Validation Plan, June 1992.
- ARCO, 2000. Clark Fork River Superfund Site Investigations Data Management/Data Validation Plan Addendum, June 2000.
- CDM Smith, 2018a. Sampling and Analysis Plan/Quality Assurance Project Plan (QAPP), Interior Dust Sampling of Anaconda Schools, Anaconda-Deer Lodge County, Montana, January 2018.
- CDM Smith 2018b. Sampling and Analysis Plan/Quality Assurance Project Plan, Interior Dust Sampling of Anaconda Head Start, Anaconda Smelter Superfund Site, Rev. 1. March 20, 2018.
- EPA 2017. National Functional Guidelines for Inorganic Superfund Methods Data Review, EPA-540-R-2017-001, January 2017.



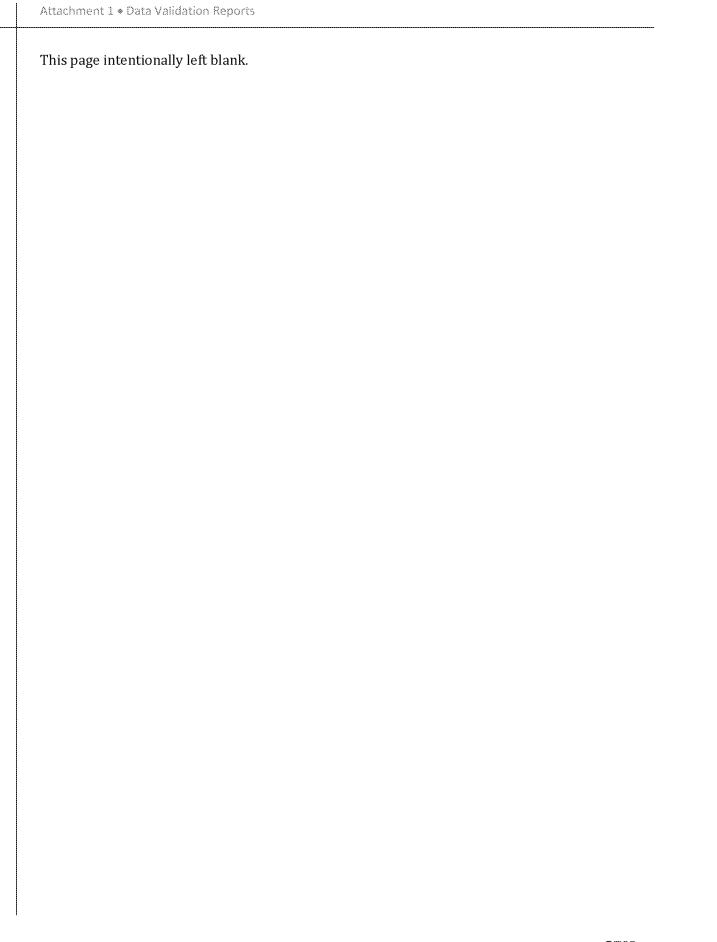
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Attachment 1

Data Validation Reports







Sample Delivery Group (SDG) Number: MH0AA7
Laboratory: Bonner Analytical

Matrix: Dus

Collection date: 3/24/2108 & 3/26/2108

Analysis/Methods:

Comments (note deviations):

CLP Total Recoverable Metals - ICP AES (Arsenic and Lead)

Sample Number	CLP Number	Sample Number	CLP Number
Head Start - Gnd Front Door	MH0AA0	Head Start- HV Floor Duplicate	MH0AB0
Head Start - 1st Floor Back Door	MH0AA1	Lincoln-1st Floor Main Door	MH0AB1
Head Start - Floor Mat Rinsate	MH0AA2	Lincoln-1st Floor Playground Door	MH0AB2
Head Start - Gnd Hallway	MH0AA3	Lincoln-Ada Gym	MH0AB3
Head Start - Gnd Classroom 1	MH0AA4	Lincoln-1st Floor by RM11 Door	MH0AB4
Head Start - Gnd Classroom 2	MH0AA5	Lincoln- Floor Mat Rinsate	MH0AB5
Head Start - 1st Floor Hallway	MH0AA6	Lincoln- HV Floor Rinsate	MH0AB6
Head Start - 1st Floor Classroom 3	MH0AA7	Lincoln-1st Floor Rm11	MH0AB7
Head Start - 1st Floor Classroom 4	MH0AA8	Lincoln-1st Floor Hall	MH0AB8
Head Start - 1st Floor Children's Restroom	MH0AA9	Lincoln-1st Floor Library	MH0AB9

Data validation was performed in accordance with the specific analytical methods and the National Functional Guidelines for Inorganic Superfund Methods Data Review (EPA January 2017).

Metals

Precision:

Are the field duplicate relative percent differences (RPD) ≤ 20% for water ≤35% for soils or within CRQL criteria?

Are the laboratory duplicate RPDs ≤ 20% for water ≤35% for soils or within CRQL criteria?

Are the matrix spike duplicates RPD ≤ 20%?

Comments (note deviations):

Yes

N/A

Comments (note deviations):

Field Duplicates	<u>Sample</u> Head Start - 1st Floor Back Door MH0AA1	<u>Duplicate</u> Head Start- HV Floor Duplicate MH0AB0	<u>CRQL</u>	RPD % Acceptable	Qualifier Associated Samples
MS/MSD N/A		<u>%R</u>	Limits	RPD %	Qualifiers Associated Samples
LCSD N/A		<u>%R</u>	<u>Limits</u>	RPD %	Qualifiers Associated Samples
Laboratory Duplicate	<u>Sample</u>	<u>Duplicate</u>	CRQL	RPD % Acceptable	Qualifier Associated Samples

Accuracy:	Yes No N/A
Were serial dilutions analyzed and within control limits of ±10% for waters (± for 15% for soils) or initial sample result less than 50x MDL?	No
Was matrix spike criteria met (frequency 20% and % recovery 75-125%)?	No
Was post digestion spike criteria met (if applicable)?	NR
Was laboratory control sample criteria met?	Yes
Was laboratory blank criteria met (within control limits)?	No
Were ICV/CCV % recoveries within 90-110%?	Yes
Were the Detection Limit PQL Standards within 70-130?	N/A
Was the %D on form 15-IN for the initial calibration instrument response and concentration data <30%?	Yes
Were ICSA/ICSAB % recoveries acceptable or within CRQL criteria?	Yes
Was the tune %RSD <5% ?	N/A
Was internal standard criteria met?	N/A

		Initial County Dec. 11				
Serial Dilution	<u>Analyte</u>	Initial Sample Result (mg/kg)	<u>%D</u>	<u>50 x MDL</u>	Qualifier	Associated Samples
	Arsenic	32.7	16%	4.3	J/UJ	All samples
MS	<u>Analyte</u> Lead	<u>%R</u> 146%	<u>Limits</u> 75-125	Post Digestion % R NR	Qualifier None	Associated Samples Initial sample result > 4xs the spike added
LCS	<u>Analyte</u>	<u>%R</u> Acceptable	<u>Limits</u>		Qualifier	Associated Samples
ICV/CCV	<u>Analyte</u>	<u>%R</u> Acceptable	<u>Limits</u>		Qualifier	Associated Samples
Blanks Prep Blank Arsenic	Note: ICBs and Result -0.094	Prep blanks are associa	ated with all samples. In MDL/CRQL 0.086 / 1.0	ndividual CCBs are as		vith specific samples. <u>Associated Samples</u> - Blank result > -CRQL
<u>ICB</u>	<u>Analyte</u>	Result (ug/L) Nondetect	MDL/CRQL		Qualifier	<u>Associated Samples</u>
<u>CCB</u>	<u>Analyte</u>	Result (ug/L) Nondetect	MDL/CRQL		Qualifier	<u>Associated Samples</u>
Field Blank	Analyte	Result	MDL/CRQL		Qualifier	Associated Samples
Head Start - Floor Mat	Lead	0.29 J	0.13 / 1.0		None	Sample results > CRQL
Rinsate Lincoln- Floor Mat Rinsate	Lead	1.5	0.13 / 1.0		None	Sample results > 10x CRQL
Lincoln- HV Floor Rinsate	Lead	1.3	0.13 / 1.0		None	Sample results > 10x CRQL
ICSA/AB	Analyte - Solution A	<u>%R</u> Acceptable	Found Sol. A / True A	CRQL	Qualifier	Associated Samples
CRQL Check N/A			<u>%D</u>		Qualifiers	<u>Associated Samples</u>
Tune N/A	<u>Analyte</u>	%RSD	<u>Limits</u>		Qualifier	Associated Samples
Internal Standard	Standard / Element	<u>%RI</u>	Affected Analyte	<u>Limits</u>	Qualifier	Associated Samples
Initial Calibration	%D (Form 15) <u>Analyte</u>	<u>%D</u> Acceptable	<u>Limits</u>		Qualifier	Associated Samples

Representativeness: Were sampling procedures and design criteria met? Were holding times met? Were preservation criteria met? (0 - 6°C) Were Chain-of-Custody records complete and provided in data package? Was the raw data present for drying logs, preparation logs, analytical instrument real-time printouts and laboratory bench sheets? Were results less than MDL reported with a "U" and values less than the CRQLs but greater than MDL reported with a "J?"							Yes No N/A Yes Yes No Yes Yes Yes Yes
Comments (note deviation	<u>. ns)</u> :	re was 24°C. No qualificati	•	·			163
Holding Times	Analyte	Days to Analysis Acceptable	HT Criteria		Qualifier	Associated Samples	
Completeness (90%): Are all data in this SDG us Comments (note deviation							Yes No N/A Yes
Sensitivity: Are MDLs present and rep Do the reporting limits me Comments (note deviation	et the project req	uirements?					Yes No N/A Yes Yes
Overall Comments:							***************************************
Data Validator: Data Reviewer:		tine Molloy ie Zakowski	Date: Date:	<i>4/26/2018</i> 4/27/2018	1000A		

Sample Delivery Group (SDG) Number:

MH0AG0

Laboratory:

Bonner Analytical

Matrix:

Collection date: Analysis/Methods: 3/24/2108 3/25/2108 & 3/26/2108

CLP Total Recoverable Metals - ICP AES (Arsenic and Lead)

Sample Number **CLP Number** Sample Number **CLP Number** JSHigh- HV Floor Field Duplicate (D) MH0AG0 MemGym-Gnd Floor Locker Rm A MH0AG5 MemGym-Gnd Floor Main Door MH0AG1 MemGym-1st Floor Ball Court MH0AG6 MemGym-Floor Mat Rinsate MH0AG2 Anaconda Schools MH0AG7 MemGym-HV Floor Rinstate MH0AG3 Head Start - 1st Floor Lounge MH0AG8 MemGym-Gnd Floor S. Office MH0AG4 Moodry-Floor Mat Rinsate MH0AG9

Data validation was performed in accordance with the specific analytical methods and the National Functional Guidelines for Inorganic Superfund Methods Data Review (EPA January 2017) .

Metals

Precision: Yes No N/A Are the field duplicate relative percent differences (RPD) ≤ 20% for water ≤35% for soils or within CRQL criteria? Yes Are the laboratory duplicate RPDs ≤ 20% for water ≤35% for soils or within CRQL criteria? No Are the matrix spike duplicates RPD ≤ 20%? N/A Comments (note deviations):

Field Duplicates	Sample JSHigh-Gnd Floor Theater** MH0AE8	<u>Duplicate</u> JSHigh- HV Floor Field Duplicate (D) MH0AG0	<u>CRQL</u>	RPD % Acceptable	Qualifier Associated Samples
** Reported in SDG M	HOAEO				
MS/MSD N/A		<u>%R</u>	<u>Limits</u>	RPD %	Qualifiers Associated Samples
LCSD N/A		<u>%R</u>	<u>Limits</u>	RPD %	Qualifiers Associated Samples
Laboratory Duplicate	Sample	Duplicate	CRQL	RPD %	Qualifier Associated Samples

Acceptable

Accuracy:	Yes No N/A
Were serial dilutions analyzed and within control limits of ±10% for waters (± for 15% for soils) or initial sample result less than 50x MDL?	Yes
Was matrix spike criteria met (frequency 20% and % recovery 75-125%)?	No
Was post digestion spike criteria met (if applicable)?	Yes
Was laboratory control sample criteria met?	Yes
Was laboratory blank criteria met (within control limits)?	No
Were ICV/CCV % recoveries within 90-110%?	Yes
Were the Detection Limit PQL Standards within 70-130?	N/A
Was the %D on form 15-IN for the initial calibration instrument response and concentration data <30%?	Yes
Were ICSA/ICSAB % recoveries acceptable or within CRQL criteria?	Yes
Was the tune %RSD <5% ?	N/A
Was internal standard criteria met?	N/A
Comments (note deviations):	

Serial Dilution	<u>Analyte</u>	Initial Sample Result (mg/kg)	<u>%D</u> Acceptable	<u>50 x MDL</u>	Qualifier	<u>Associated Samples</u>
MS	<u>Analyte</u> Arsenic Lead	<u>%R</u> 3% -662%	<u>Limits</u> 75-125 75-125	Post Digestion % R 105% NR	Qualifier J/UJ None	Associated Samples All samples added
LCS	<u>Analyte</u>	<u>%R</u> Acceptable	<u>Limits</u>		Qualifier	Associated Samples
ICV/CCV	Analyte	<u>%R</u> Acceptable	<u>Limits</u>		Qualifier	Associated Samples
Blanks Prep Blank	Note: ICBs and Analyte	Prep blanks are associa <u>Result</u> Nondetect	ated with all samples. In MDL/CRQL	ndividual CCBs are as		vith specific samples. <u>Associated Samples</u>
<u>ICB</u>	<u>Analyte</u>	Result (ug/L) Nondetect	MDL/CRQL		Qualifier	Associated Samples
CCBs	<u>Analyte</u>	Result (ug/L)	MDL/CRQL		Qualifier	Associated Samples
CCB4	Arsenic	1.4	0.086 / 1.0		None	Sample results either nondetect or > CRQL
Field Blank	Analyte	Result	MDL/CRQL		Qualifier	Associated Samples
MemGym-Floor Mat Rinsate	Lead	0.22	0.13 / 1.0		None	Sample results either nondetect or > CRQL
MemGym-HV Floor Rinstate NIOUUI Y-FIOUI MAL Rinsata		Nondetect Nondetect				
ICSA/AB	<u>Analyte -</u> Solution A	<u>%R</u> Acceptable	Found Sol. A / True A	<u>CRQL</u>	Qualifier	Associated Samples
CRQL Check N/A			<u>%D</u>		Qualifiers	Associated Samples
Tune N/A	<u>Analyte</u>	%RSD	<u>Limits</u>		Qualifier	Associated Samples
Internal Standard	Standard / Element	<u>%Ri</u>	Affected Analyte	<u>Limits</u>	Qualifier	Associated Samples
Initial Calibration %	6D (Form 15) Analyte	<u>%D</u> Acceptable	<u>Limits</u>		Qualifier	Associated Samples

Representativeness: Were sampling procedures and design criteria met? Were holding times met? Were preservation criteria met? (0 - 6°C) Were Chain-of-Custody records complete and provided in data package? Was the raw data present for drying logs, preparation logs, analytical instrument real-time printouts and laboratory bench sheets? Were results less than MDL reported with a "U" and values less than the CRQLs but greater than MDL reported with a "J?" Comments (note deviations): Cooler temperature was 24°C. No qualification was required per guidelines and method.							
Holding Times	<u>Analyte</u>	<u>Days to Analysis</u> Acceptable	HT Criteria		Qualifier	Associated Samples	
Completeness (90%): Are all data in this SDG us Comments (note deviation							Yes No N/A Yes
Sensitivity: Are MDLs present and rep Do the reporting limits med Comments (note deviation	et the project requ	uirements?					Yes No N/A Yes Yes
Overall Comments:							
Data Validator:	Kris	tine Molloy	Date:	4/28/2018			

Date:

4/29/2018

Data Reviewer:

Cherie Zakowski

Sample Delivery Group (SDG) Number:

Laboratory:

MH0AE0 Bonner Analytical

Matrix:

Dust

Collection date: Analysis/Methods: 3/25/2108 & 3/27/2108

CLP Total Recoverable Metals - ICP AES (Arsenic and Lead)

Sample Number	CLP Number	Sample Number	CLP Number
Moodry-3rd Floor Hall	MH0AE0	JSHigh-Gnd Floor Hall	MH0AF0
Moodry-HV Floor Field Duplicate (D)	MH0AE1	JSHigh-1st Floor Rm 201	MH0AF1
JSHigh - Gnd Floor Main Door	MH0AE2	JSHigh-1st Floor Rm 207	MH0AF2
JSHigh-Gnd Floor Cafeteria Door	MH0AE3	JSHigh-1st Floor Library	MH0AF3
JSHigh - Gnd Floor door by BandRm	MH0AE4	JSHigh-1st Floor Hall	MH0AF4
JS HighFloor Mat Rinsate	MH0AE5	JSHigh-2nd Floor Rm 301	MH0AF5
JSHigh- HV Floor Rinsate	MH0AE6	JSHigh-2nd Floor Rm 308	MH0AF6
JSHigh-Gnd Floor Cafeteria	MH0AE7	JSHigh-2nd Floor Rm 312	MH0AF7
JSHigh-Gnd Floor Theater	MH0AE8	JSHigh-2nd Floor Hall	MH0AF8
JSHigh-Gnd Floor Band Room	MH0AE9	JSHigh- HV Flmat Field Duplicate (D)	MH0AF9

Data validation was performed in accordance with the specific analytical methods and the National Functional Guidelines for Inorganic Superfund Methods Data Review (EPA January 2017).

Metals

Precision:

Are the field duplicate relative percent differences (RPD) ≤ 20% for water ≤35% for soils or within CRQL criteria?

Are the laboratory duplicate RPDs ≤ 20% for water ≤35% for soils or within CRQL criteria?

Are the matrix spike duplicates RPD ≤ 20%?

Yes Yes N/A

Yes No N/A

Comments (note deviations):

Field Duplicates	<u>Sample</u>	<u>Duplicate</u>	CRQL	RPD %	Qualifier Associated Samples
	Moodry-2nd Floor Rm 22** MH0AD6	Moodry-HV Floor Field Duplicate (D) MH0AE1		Acceptable	
** Reported in SI	OG MH0AC0				
	JSHigh - Gnd Floor door by BandRm MH0AE4	JSHigh- HV Flmat Field Duplicate (D) MH0AF9		Acceptable	
MS/MSD N/A		<u>%R</u>	<u>Limits</u>	RPD %	Qualifiers Associated Samples
LCSD N/A		<u>%R</u>	<u>Limits</u>	RPD %	Qualifiers Associated Samples
Laboratory Duplicate	<u>Sample</u>	<u>Duplicate</u>	CRQL	RPD % Acceptable	Qualifier Associated Samples

Accuracy: Were serial dilutions analyzed and within control limits of ±10% for waters (± for 15% for soils) or initial sample result less than 50x MDL? Was matrix spike criteria met (frequency 20% and % recovery 75-125%)? Was post digestion spike criteria met (if applicable)? Was laboratory control sample criteria met? Was laboratory blank criteria met (within control limits)? Were ICV/CCV % recoveries within 90-110%? Were the Detection Limit PQL Standards within 70-130? Was the %D on form 15-IN for the initial calibration instrument response and concentration data <30%? Were ICSA/ICSAB % recoveries acceptable or within CRQL criteria? Was the tune %RSD <5%? Was internal standard criteria met? Comments (note deviations):								
Serial Dilution	<u>Analyte</u>	Initial Sample Result (mg/kg)	<u>%D</u> Acceptable	50 x MDL	Qualifier	Associated Samples		
MS	<u>Analyte</u> Arsenic	<u>%R</u> 61%	<u>Limits</u> 75-125	Post Digestion % R 139%	Qualifier J/UJ	Associated Samples All samples		
LCS	<u>Analyte</u>	<u>%R</u> Acceptable	<u>Limits</u>		Qualifier	Associated Samples		
ICV/CCV	<u>Analyte</u>	<u>%R</u> Acceptable	<u>Limits</u>		Qualifier	Associated Samples		
Blanks Prep Blank	Note: ICBs and f Analyte	Prep blanks are associa <u>Result</u> Nondetect	ated with all samples. Ir	ndividual CCBs are as		rith specific samples. Associated Samples		
<u>ICB</u>	<u>Analyte</u>	Result (ug/L) Nondetect	MDL/CRQL		Qualifier	<u>Associated Samples</u>		
CCBs	<u>Analyte</u>	Result (ug/L) Nondetect	MDL/CRQL		Qualifier	<u>Associated Samples</u>		
Field Blank JS HighFloor Mat Rinsa JSHigh- HV Floor Rinst		Result Nondetect Nondetect	MDL/CRQL		Qualifier	Associated Samples		
ICSA/AB	<u>Analyte -</u> Solution A	<u>%R</u> Acceptable	Found Sol. A / True A	CRQL	Qualifier	<u>Associated Samples</u>		
CRQL Check N/A			<u>%D</u>		Qualifiers	Associated Samples		
Tune N/A	<u>Analyte</u>	%RSD	<u>Limits</u>		Qualifier	Associated Samples		
Internal Standard	<u>Standard /</u> <u>Element</u>	<u>%RI</u>	Affected Analyte	<u>Limits</u>	Qualifier	Associated Samples		

Initial Calibration %	D (Form 15) <u>Analyte</u>	<u>%D</u> Acceptable	<u>Limits</u>		Qualifier	Associated Samples	
Representativeness:							Yes No N/A
Were sampling procedure	es and design crit	eria met?					Yes
Were holding times met?							Yes
Were preservation criteria	` ,						No
		and provided in data packag				_	Yes
•		preparation logs, analytical i	•	•		?	Yes Yes
Comments (note deviatio	•	a "U" and values less than th	ne CRQLS but greater t	nan wibt reported wii	na J?		res
***************************************		ıre was 24°C. No qualificati	on was required per gui	delines and method.			
Holding Times	<u>Analyte</u>	Days to Analysis Acceptable	HT Criteria		Qualifier	Associated Samples	
Completeness (90%):							Yes No N/A
Are all data in this SDG u							Yes
Sensitivity:							Yes No N/A
Are MDLs present and re	ported?						Yes
Do the reporting limits me Comments (note deviatio		quirements?					Yes
Overall Comments:							
Data Validator:	Kris	tine Molloy	Date:	4/26/2018			
Data Reviewer:	Cher	rie Zakowski	Date:	4/27/2018			

Sample Delivery Group (SDG) Number: MH0AC0

Laboratory: Bonner Analytical

Matrix:

Collection date: 3/26/2108 & 3/27/2108

Analysis/Methods:

CLP Total Recoverable Metals - ICP AES (Arsenic and Lead)

Sample Number	CLP Number	Sample Number	CLP Number
Lincoln-2nd Floor Rm23	MH0AC0	Moodry-Gnd Floor Boys Locker Room	MH0AD0
Lincoln-2nd Floor Staff Lounge	MH0AC1	Moodry-Gnd Floor IT Lab	MH0AD1
Lincoln-2nd Floor Hall	MH0AC2	Moodry-1st Floor Stage	MH0AD2
Lincoln-Ada Gym Stage/Classroom	MH0AC3	Moodry-1st Floor Gym	MH0AD3
Lincoln-Ada Gym Ball Court	MH0AC4	Moodry-1st Floor Hall	MH0AD4
Lincoln - Floor Duplicate (D)	MH0AC5	Moodry-2nd Floor Rm 20	MH0AD5
Moodry-1st Floor Main Door	MH0AC6	Moodry-2nd Floor Rm 22	MH0AD6
Moodry-1st Floor South Door	MH0AC7	Moodry-2nd Floor Rm 25	MH0AD7
Moodry-HV Floor Rinsate	MH0AC8	Moodry-3rd Floor Rm 30	MH0AD8
Moodry-Gnd Floor Cafeteria	MH0AC9	Moodry-3rd Floor Rm 34	MH0AD9

Data validation was performed in accordance with the specific analytical methods and the National Functional Guidelines for Inorganic Superfund Methods Data Review (EPA January 2017) .

Metals

Precision: Are the field duplicate relative percent differences (RPD) ≤ 20% for water ≤35% for soils or within CRQL criteria?

Are the laboratory duplicate RPDs ≤ 20% for water ≤35% for soils or within CRQL criteria?

Are the matrix spike duplicates RPD ≤ 20%?

Comments (note deviations):

Yes No N/A Yes Yes N/A

Field Duplicates	Sample Moodry-2nd Floor Rm 22 MH0AD6	<u>Duplicate</u> Moodry-HV Floor Field Duplicate MH0AE1**	<u>CRQL</u>	RPD % Acceptable	Qualifier Associated Samples
Data reported in SI	Lincoln-1st Floor Library++ MH0AB9 DG MH0AE0	Lincoln - Floor Duplicate (D) MH0AC5		Acceptable	

^{**} D

⁺⁺ Data reported in SDG MH0AA7

MS/MSD N/A		<u>%R</u>	<u>Limits</u>	RPD %	Qualifiers Associated Samples
LCSD N/A		<u>%R</u>	<u>Limits</u>	RPD %	Qualifiers Associated Samples
Laboratory Duplicate	<u>Sample</u>	<u>Duplicate</u>	CRQL	RPD % Acceptable	Qualifier Associated Samples

Accuracy: Were serial dilutions analyzed and within control limits of ±10% for waters (± for 15% for soils) or initial sample result less than 50x MDL? Was matrix spike criteria met (frequency 20% and % recovery 75-125%)? Was post digestion spike criteria met (if applicable)? Was laboratory control sample criteria met? Was laboratory blank criteria met (within control limits)? Were ICV/CCV % recoveries within 90-110%? Were the Detection Limit PQL Standards within 70-130? Was the %D on form 15-IN for the initial calibration instrument response and concentration data <30%? Were ICSA/ICSAB % recoveries acceptable or within CRQL criteria? Was the tune %RSD <5%? Was internal standard criteria met? Comments (note deviations):									
Serial Dilution	<u>Analyte</u>	Initial Sample Result (mg/kg)	<u>%D</u> Acceptable	50 x MDL	Qualifier	Associated Samples			
MS	<u>Analyte</u> Arsenic Lead	<u>%R</u> 54% -152%	<u>Limits</u> 75-125 75-125	Post Digestion % R 24% NR	Qualifier J-/UJ None	Associated Samples All samples Initial sample result > 4 added	xs the spike		
LCS	<u>Analyte</u>	<u>%R</u> Acceptable	<u>Limits</u>		Qualifier	Associated Samples			
ICV/CCV	<u>Analyte</u>	<u>%R</u> Acceptable	<u>Limits</u>		Qualifier	Associated Samples			
Blanks Prep Blank	Note: ICBs and Result Nondetect	Prep blanks are assoc	iated with all samples. MDL/CRQL	Individual CCBs are a		with specific samples. Associated Samples			
<u>ICB</u>	<u>Analyte</u>	Result (ug/L) Nondetect	MDL/CRQL		Qualifier	Associated Samples			
CCBs	Analyte Arsenic	Result (ug/L) 1.4	MDL/CRQL 0.086 / 1.0		Qualifier None	Associated Samples Sample results > CRQL			
<u>Field Blank</u> Moodry-HV Floor Rinstate	<u>Analyte</u> Lead	<u>Result</u> 0.25	MDL/CRQL 0.13 / 1.0		Qualifier None	Associated Samples Sample results either n CRQL	ondetect or >		
ICSA/AB	Analyte - Solution A	<u>%R</u> Acceptable	Found Sol. A / True A	<u>CRQL</u>	Qualifier	Associated Samples			
CRQL Check N/A			<u>%D</u>		Qualifiers	Associated Samples			
Tune N/A	<u>Analyte</u>	<u>%RSD</u>	<u>Limits</u>		Qualifier	Associated Samples			
Internal Standard	Standard / Element	<u>%RI</u>	Affected Analyte	<u>Limits</u>	Qualifier	Associated Samples			

Initial Calibration %I	O (Form 15) <u>Analyte</u>	<u>%D</u> Acceptable	<u>Limits</u>	Qualifier	Associated Samples	
Were results less than MD Comments (note deviation	met? (0 - 6°C) cords complete a for drying logs, p L reported with a s):	and provided in data pack preparation logs, analytica a "U" and values less thar	I instrument real-time printo	outs and laboratory bench shee an MDL reported with a "J?" elines and method.	ts?	Yes No N/A Yes Yes No Yes Yes Yes Yes Yes
Holding Times	<u>Analyte</u>	Days to Analysis Acceptable	HT Criteria	Qualifier	Associated Samples	
Completeness (90%): Are all data in this SDG us Comments (note deviation						Yes No N/A Yes
Sensitivity: Are MDLs present and rep Do the reporting limits mee Comments (note deviation	et the project req	uirements?				Yes No N/A Yes Yes

4/28/2018

Date:

Overall Comments:			
Data Validator:	Kristine Molloy	Date:	4/27/2018

Cherie Zakowski

Data Reviewer:

Anaconda School XX Metals Data Validation Report

Sample Delivery Group (SDG) Number:

SL2694 Laboratory:

KATAHDIN Analytical Services

Matrix:

3/24/2108 through 3/27/2108 Collection date:

Analysis/Methods:

Metals - SW 6020

Sample Number	<u>Lab Number</u>	Sample Number	Lab Number
HEADST20	SL2694-1	LINCOLN25	SL2694-17
HEADST21	SL2694-2	LINCOLNPERSFIELDBLANK	SL2694-18
HEADST23	SL2694-3	MEMGYM20	SL2694-19
HEADST24	SL2694-4	MEMGYM21	SL2694-20
HEADST25	SL2694-5	MEMGYM23	SL2694-21
HEADSTPERFIELDBLANK	SL2694-6	MEMGYM24	SL2694-22
JSHIGH20	SL2694-7	MEMGYM25	SL2694-23
JSHIGH21	SL2694-8	MEMGYMPERSFIELDBLANK	SL2694-24
JSHIGH23	SL2694-9	MOODRY20	SL2694-25
JSHIGH24	SL2694-10	MOODRY21	SL2694-26
JSHIGH25	SL2694-11	MOODRY23	SL2694-27
JSHIGHPERSFIELDBLANK	SL2694-12	MOODRY24	SL2694-28
LINCOLN20	SL2694-13	MOODRY25	SL2694-29
LINCOLN21	SL2694-14	MOODRYPERSFIELDBLANK	SL2694-30
LINCOLN23	SL2694-15	PERSAIRLOTBLANK	SL2694-30
LINCOLN24	SL2694-16		

Data validation was performed in accordance with the specific analytical methods and the National Functional Guidelines for Inorganic Superfund Methods Data Review (EPA January 2017) .

Metals - SW 6020

Are the field duplicate relative percent differences (RPD) ≤ 20% for water ≤35% for soils or within CRQL criteria?

Precision:

e the laboratory duplicate RPDs ≤ 20% for water ≤35% for soils or within CRQL criteria? e the matrix spike duplicates RPD ≤ 20%? e the laboratory control spike duplicates RPD ≤ 20%? emments (note deviations):							
Field Duplicates N/A	<u>Sample</u>	<u>Duplicate</u>	PQL	RPD %	Qualifier Associated Samples		
MS/MSD N/A		<u>%R</u>	<u>Limits</u>	RPD %	Qualifiers Associated Samples		
LCSD LCSOLD11IMS1 LCSOLD11IMS2		RPD % Acceptable Acceptable	<u>Limits</u>		Qualifiers Associated Samples		
Laboratory Duplicate N/A	<u>Sample</u>	<u>Duplicate</u>	<u>PQL</u>	RPD %	Qualifier Associated Samples		

Yes No N/A

N/A

Accuracy: Were serial dilutions analyzed and within control limits of ±10% for waters (± for 15% for soils) or initial sample result less than 50x MDL? Was matrix spike criteria met (frequency 20% and % recovery 75-125%)? Was post digestion spike criteria met (if applicable)? Was laboratory control sample criteria met? Was laboratory blank criteria met (within control limits)? Were ICV/CCV % recoveries within 90-110%? Were the Detection Limit PQL Standards within 70-130? Was the %D on form 15-IN for the initial calibration instrument response and concentration data <30%? Were ICSA/ICSAB % recoveries acceptable or within CRQL criteria? Was the tune %RSD <5%? Was internal standard criteria met? Comments (note deviations):								
Serial Dilution N/A	<u>Analyte</u>	Initial Sample Result	<u>%D</u>	50 x MDL	Qualifier	Associated Samples		
MS N/A	<u>Analyte</u>	<u>%R</u>	<u>Limits</u>	Digestion	Qualifier	Associated Samples		
LCS LC20LD11IMS1 LC20LD11IMS2 LCS0LD11IMS1 LCS0LD11IMS2	<u>Analyte</u>	%R Acceptable Acceptable Acceptable Acceptable	<u>Limits</u>		Qualifier	Associated Samples		
ICV/CCV	Analyte	<u>%R</u> Acceptable	<u>Limits</u>		Qualifier	Associated Samples		
Blanks Prep Blank PBSLD11IMS1 PBSLD11IMS1	Note: ICBs and Lead Lead	Prep blanks are associa Result 0.037 0.026	ted with all samples. Ind <u>MDL/PQL</u> 0.007 / 0.10 0.007 / 0.10	ividual CCBs		iated with specific sam Associated Samples All samples with the 6 SL2694-025		
ICB	<u>Analyte</u>	Result (ug/L) Nondetect	MDL/PQL		Qualifier	Associated Samples		
CCB (4/13/18 16:10) CCB (4/13/18 16:56)	<u>Analyte</u> Lead Lead	Result (ug/L) 0.010 J 0.024 J	MDL/PQL 0.007 / 0.10 0.007 / 0.10		Qualifier RL U RL U	Associated Samples SL2694-027 SL2694-027		
Field Blank	Analyte	Result	MDL/PQL		Qualifier	Associated Samples		
HEADSTPERSFIELDBLANK JSHIGHPERSFIELDBLANK LINCOLNPERSFIELDBLANK MEMGYMPERSFIELDBLANK MOODRYPERSFIELDBLANK PERSAIRLOTBLANK	Lead Lead Lead Lead Lead Lead Lead Lead	0.031 J 0.035 J 0.035 J 0.033 J 0.048 J 0.051 J	0.007 / 0.10 0.007 / 0.10 0.007 / 0.10 0.007 / 0.10 0.007 / 0.10 0.007 / 0.10		RLU RLU RLU RLU RLU RLU	SL2694-01 through S SL2694-07 through S SL2694-013 through S SL2694-019 through S SL2694-026 through S All samples with the G SL2694-025	6L2694-011 6L2694-017 6L2694-023 6L2694-029	
ICSA/AB	<u>Analyte -</u> Solution A	<u>%R</u> Acceptable	Found Sol. A / True A	CRQL	Qualifier	Associated Samples		
PQL Standard Check			<u>%R</u> Acceptable		Qualifiers	Associated Samples		

Tune	<u>Analyte</u>	<u>%RSD</u> Acceptable	<u>Limits</u>		Qualifier	Associated Samples	
Internal Standard	Standard / Element	<u>%R</u> Acceptable	Affected Analyte	<u>Limits</u>	Qualifier	Associated Samples	
Initial Calibration %D (Fo	rm 15) <u>Analyte</u>	<u>%D</u>	<u>Limits</u>		Qualifier	Associated Samples	
Representativeness: Were sampling procedures and Were holding times met? Were preservation criteria met? Were Chain-of-Custody records Was the raw data present for dr Were results less than MDL rep Comments (note deviations):	(0 - 6°C) complete and provicying logs, preparation	n logs, analytical instrum values less than the CR				?	Yes No N/A Yes Yes N/A Yes Yes Yes
Holding Times	<u>Analyte</u>	Days to Analysis Acceptable	HT Criteria		Qualifier	Associated Samples	
Completeness (90%): Are all data in this SDG useable Comments (note deviations):	?						Yes No N/A Yes
Sensitivity: Are MDLs present and reported Do the reporting limits meet the Comments (note deviations):		?					Yes No N/A Yes Yes
Overall Comments:							
Data Validator:	Kristi	ne Molloy	Date	: 5/7/2018			

Date: 5/7/2018

Cherie Zakowski

Data Reviewer:

Appendix B

Copies of Field Logbook Notes







Outdoor writing products · I'm Outdoor writing people



All componence of tick product are requisitive

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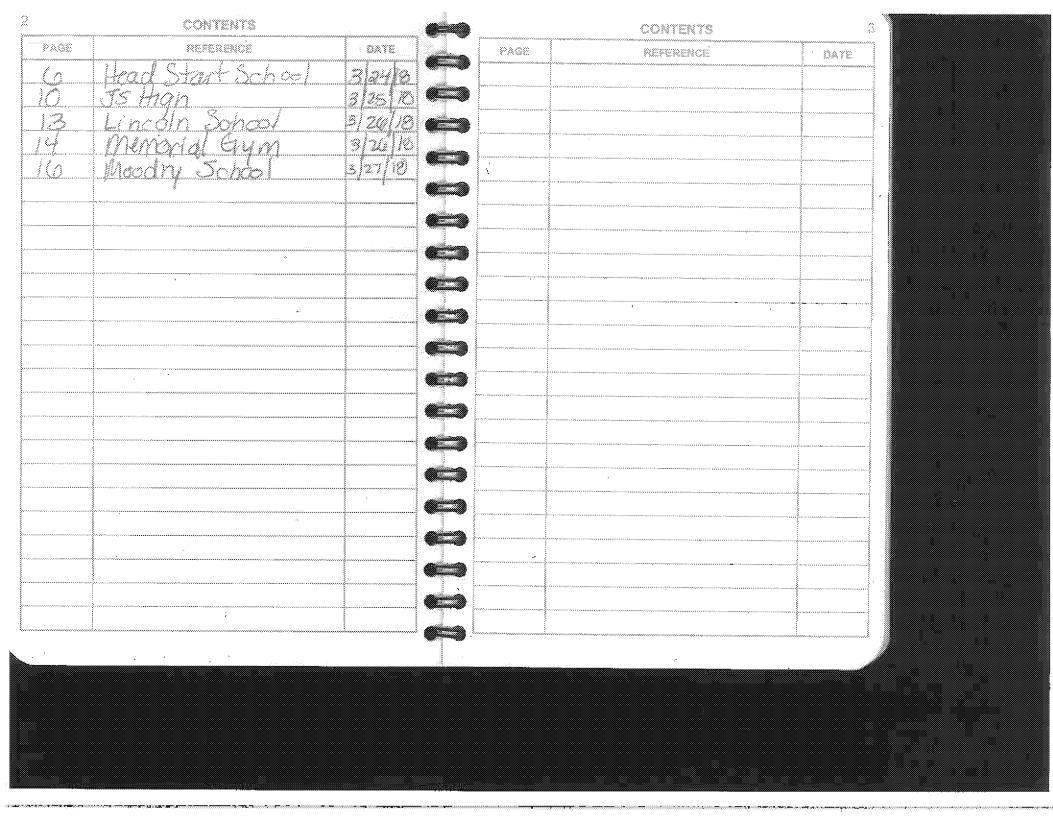
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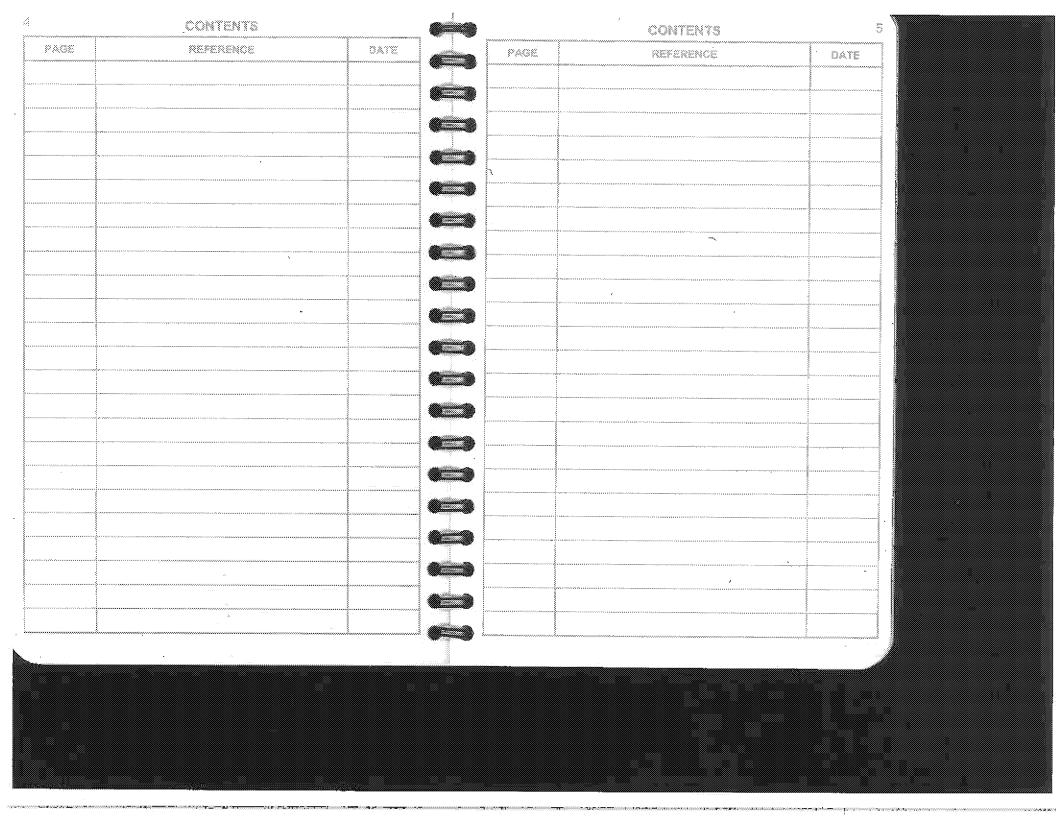
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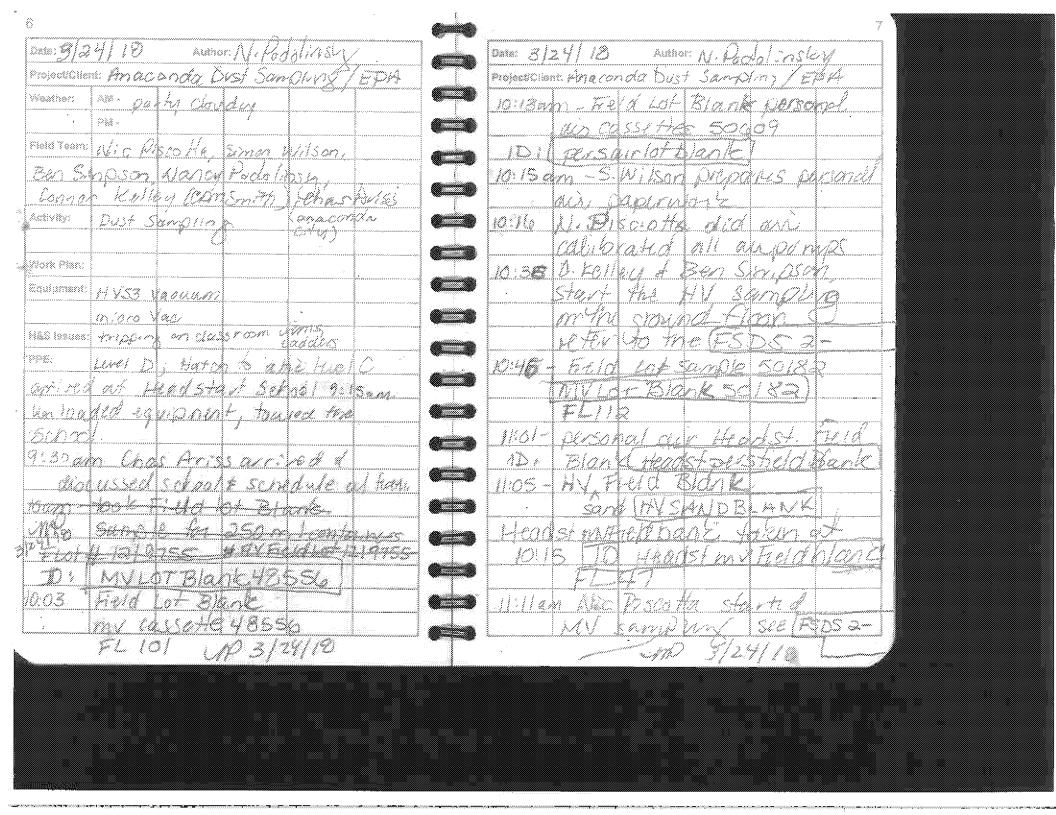
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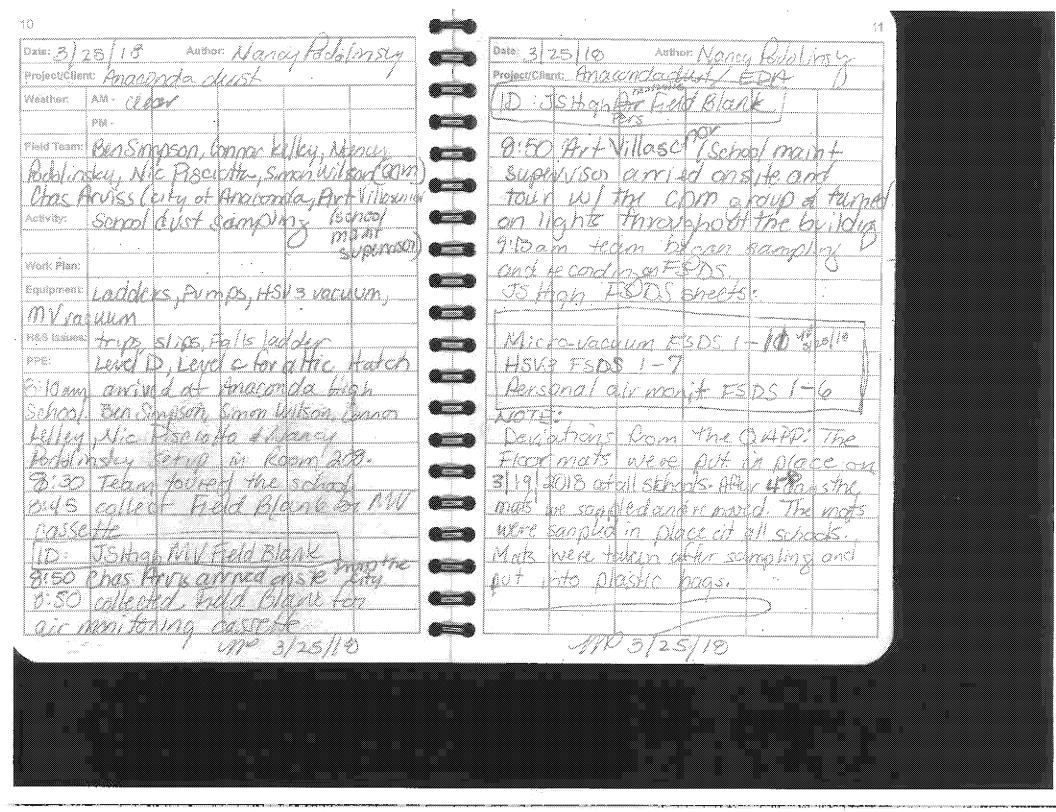
ALL-WEATHER LOGBOOK

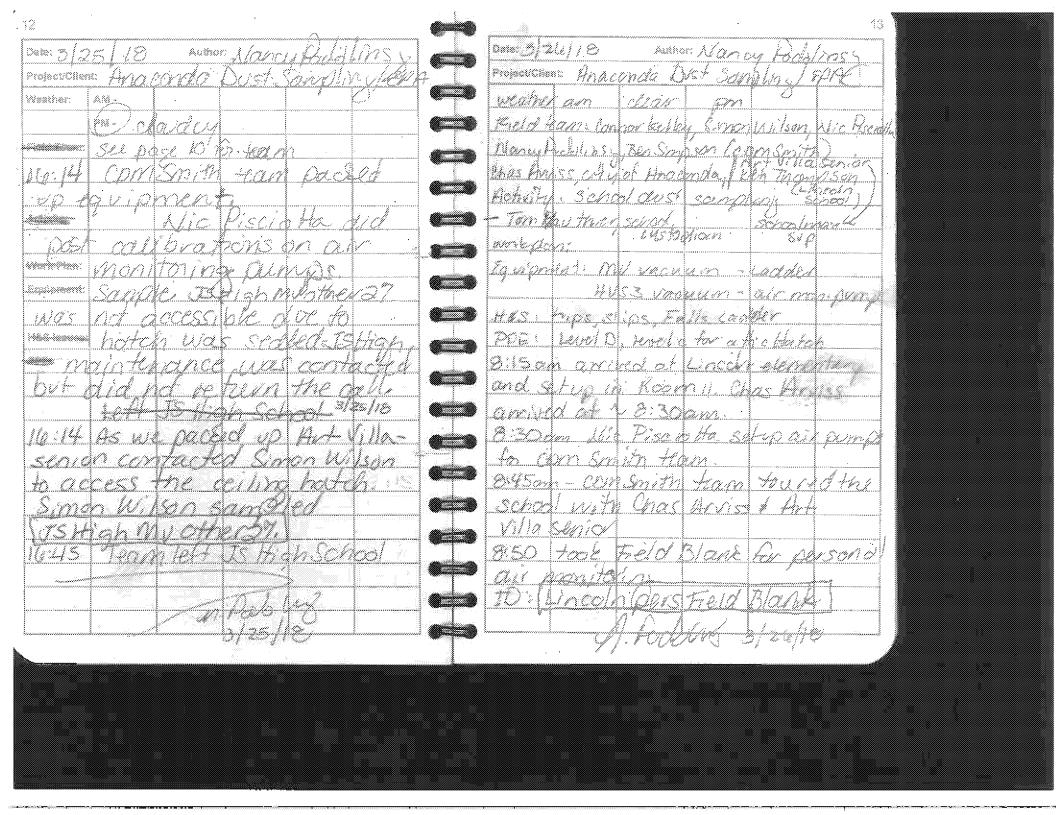
END DATE:

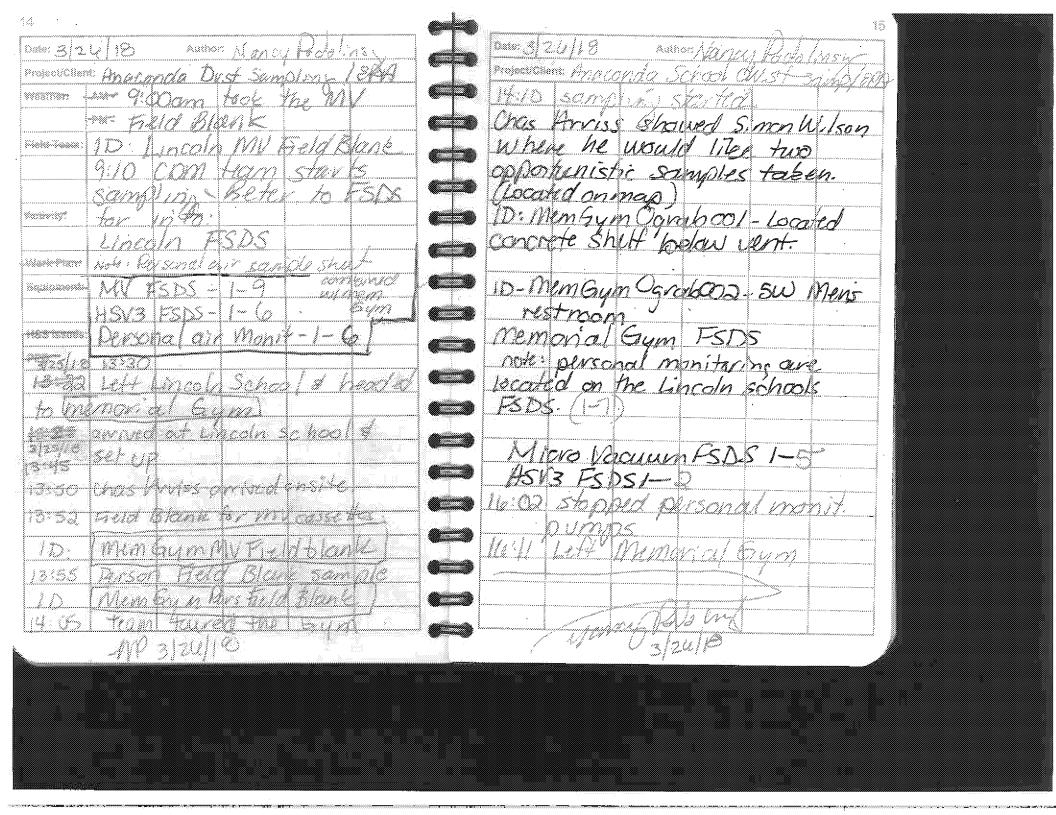


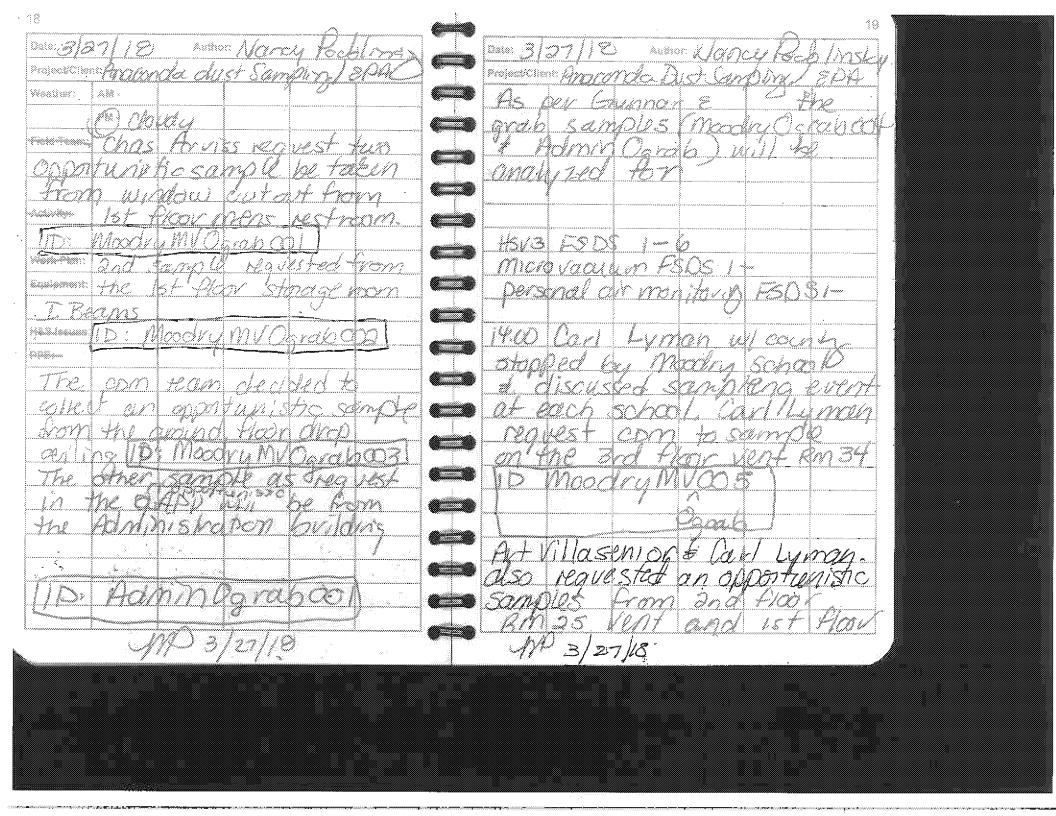


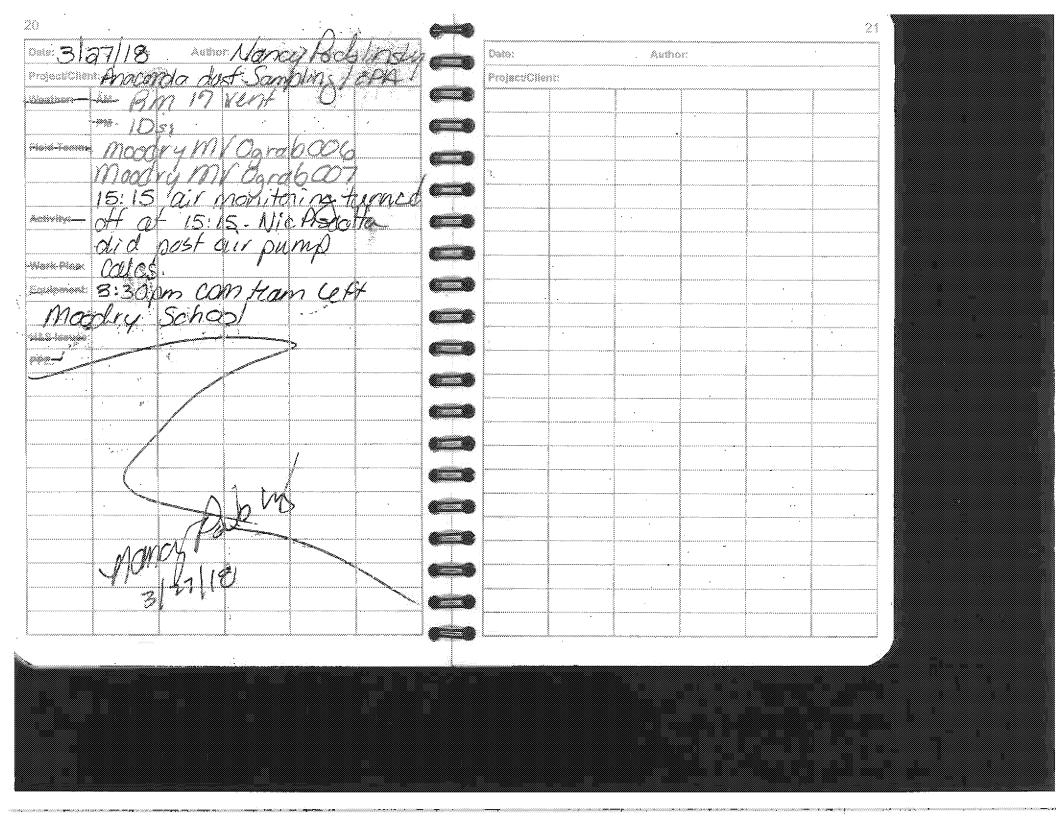














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Appendix C

Copies of Field Sample Data Sheets





Sheet No.:

ANACONDA FIELD SAMPLE DATA SHEET (FSDS) FOR PERSONAL AIR School: (Headstart) Lincoln | Moodry | High | Memorial Sampling Date: 3/24/15 Field Logbook No: (7) Other Page No: 2/1/ Data ilem Persancot Blank Headstpershield blan & Sample ID C.C. CONTRACT 44.557.000 Surface, Ceiling Tile, Air Vent, Surface, Celling Tile, Air Vent Surface, Ceiling Tile, Air Vent. Sampling Activities Baller Room, Light Fixture, Attic. Boiler Room, Light Fixture, Attic. Boiler Room, Light Fixture, Attic, (circle all that apply) HVS3 Floor HVS3 Floor HVS3 Floor Other Other Other Sasement, Ground Floor, Basement, Ground Floor, Basement, Ground Floor, Location Description 1st Floor, 2nd Floor, 3rd Floor, 1st Floor, 2nd Floor, 3rd Floor, 1st Floor, 2nd Floor, 3rd Floor, (circle all that apply) Main Floor Main Floor Main Floor Other Other Other Indoor Sample Venue Indoor Outdoor Both Outdoor Both NA Indoor Ouldoor Both NA Sample Type LB. Other FS (FB LB Other LB . Other Personnel Information: Task LOT Blane I Field Blank in Aftr Name Sample Air Type PA-EXC PA-TWA NA) PA EXC. PA TWA NA PA-EXC PA-TWA Flow Meter Type Rotameter DryCal NA Rotameter DryCal MA Rotameter DryCal Cassette ot No (For Blanks "2" through "Pemp ID" to "Sample Air Stop Flave" Flow Meter ID // 15 then circle NA for "Pomp Foult" & enter 0 for Total Time & Quantity) Pump ID Sample Air Start Date Sample Air Start Time Sample Air Start Flow (Limin) Sample Air Stop Date Sample Air Stop Time Sample Air Stop Flow (Umin) Pump Fault Ma NA Yes No NA Yes No Yes Sample Total Time (min) Sample Quantity (L) Field Comments Cassette Lot Number:

For Field Team Completion: Completed by, <u>60</u> QC by For Data Entry: Entered by: QC by:

Lab: Katahdin

(circle)

Other

v 032118

50609

Air Filter Diameter = 37mm; Pore Size = 0.8um

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ANACONDA FIELD SAMPLE DATA SHEET (FSDS) FOR PERSONAL AIR

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ochool, ¿neadsia	u fracon i Moo	<u>dry High Mer</u>	nonai	Sampling D	(ate: <u>5/ 24</u>	/ / %
Ana.				Elaid Laska		
Viner				riela Logoa	iok No:	
				290 241		
				Page No: <u>*</u>		

Data item					2			3	
Sample ID	Head	st sk							ì
Sampling Activities (circle all that apply)	Surface, Ce Boiler Roon HVS3 Floor Other	n, Light Fi			Ceiling Tile, om, Light Fi or			Ceiling Tile, om, Light Fi or	
Location Description ((circle all that apply)	Besement 1st Floor 2: Main Floor Other				, Ground Fi 2nd Flaor, 3 r			, Ground Fl 2nd Floor, 3	
Sample Venue	hidaar (Ouldoor	Both NA	Indoor	Outdoor	Bath NA	Indoop	Ouldoor	Both NA
Sample Type	f\$ FB	LB Oth	er	FS FB	LB Oth	91	F5 78	LB Oth	er
Personnal Information: ID <u>구스</u> Name <u>B</u> S			Т	ask <u> *^^</u>	A. 4883				
Sample Air Type	NA PAEX	C PATV	/A	NA PA-E	XC PA-TW	A.	NA PAE	XC PA-TW	Α
Flow Meter Type	NA R	otameter	OiyCah	NA I	Rotameter	DryCell	NA (Rotemeter	DryCal
Cassotte .et No <u>506.09</u>	Flow Mete	rID ^{i i}	oo _l			Z" through "Pi IA for Yump fi			
Pump ID	•	7 4 2 7					74		
Sample Air Start Date	78/12				77	7			
Sample Air Start Time	14.37					/			
Sample Air Start Flow (Limin)	2.134								
Sample Air Stop Date	3/29/	A			£	7		L	
Sample Air Stop Time	1009	•							
Sample Air Stop Flow (L/min)	200								
Pump Fault	/No)	NA	Yes	No	ŅΑ	Yes	No	NA	Yes
Sample Total Time (min)	331								
Sample Quantity (L)	6.79								
Field Comments Cassette Lot Number: (circle) 60609									
Other									

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Sheet No. _∫

ANACONDA FIELD SAMPLE DATA SHEET (FSDS) FOR PERSONAL AIR

Sch	ool:	Headstart	Lincoln Moo	dry Hiah	Memorial	Sampling	Date: <u>3 /</u>	2.4/16	
		Other				Field Logb	iook No:	0/	
						Page No:	6		

Data item		1			2			3	
Sample ID	Head:	121							
Sampling Activities (circle all that apply)	SurfacesCo Boiler Roon HVS3 Floor Other	ı, Light Fix	tuře, Atho,		eiling Tile, A m, Light Flx ir			Celling Tile, i om, Light Fix or	
Location Description < (circle all that apply)	Basement 1st Floor V Main Ploor Other	Ground Fic to Phoor, 3	10L - 1	Basement	, Ground Flo 2nd Floor, 3		Basemen	t, Ground Fle 2nd Floor, 3	
Sample Venue	Indoor C	Suldoor	Both NA	Indoor	Outdoor I	Both NA	Indocr	Outdoor	Both NA
Sample Type	(S) FB	LB Othe	łl	FS FB	LB Othe	r	FS FB	LB /Oth	3(
Personnet Information: ID&NameS∵⊷	الروي.		Ť	ask <u>sov</u> 2	9425			3 /	
Sample Air Type	NA PAE)	C PÁTW	uk.	NA PA-E	XG PA-TW/	4	NA PAI	XÇ PA-TW	A.
Flow Meter Type	NA R	otameter	DryCal	NA F	Otameter	DryCal	NA	Rotameter	DryCa
Cassette					(For Blanks ")	" through "Pi	une ID" to "S	imple Åir Stop	flow"
	Flow Mete	rID ()	00/		CO. Thursday and the control of the			O for Total Tim	
ot No <u>50분으의</u> Pump ID	Flow Mete			Ī	CO. Thursday and the control of the			0 f@ Total Tim	
ot No 5060 A		6.0	00/		CO. Thursday and the control of the			0 fer Total Tim	
at No <u>১০৮০ প</u> Pump ID	8 2	6.0	00/		CO. Thursday and the control of the			0 f@r Total Tim	
ot No <u>১০৮০ প</u> Pump ID Sample Air Start Date	82.75 3/24]: 10:37	6.0	00 /		CO. Thursday and the control of the			O fee Total Tim	
ot No <u>SORO</u> Pump ID Sample Air Start Date Sample Air Start Time	82.75 3/24]: 10:37	<i>6</i>	00 /		CO. Thursday and the control of the			O fair Total Tim	
ot No <u>SOFO</u> Pump ID Sample Air Start Date Sample Air Start Time Sample Air Start Flow (L/nin)	\$275 3/24/1 10:37 2:05	<i>6</i>			CO. Thursday and the control of the			O fair Total Tim	
ot No SONO Pump ID Sample Air Start Date Sample Air Start Time Sample Air Start Flow (Limin) Sample Air Stop Date	8278 3/24/1 10:37 2:05 3/24/1 16:09	<i>6</i>			CO. Thursday and the control of the			O feir Total Tim	
ot No SON ON Pump ID Sample Air Start Date Sample Air Start Time Sample Air Start Flow (Limin) Sample Air Stop Date Sample Air Stop Time	8278 3/24/1 10:37 2:05 3/24/1 16:09	<i>6</i>	Yes	No	CO. Thursday and the control of the			D fair Total Tim	
ot No SONO Pump ID Sample Air Start Date Sample Air Start Time Sample Air Start Flow (Limin) Sample Air Stop Date Sample Air Stop Time Sample Air Stop Flow (Limin)	8275 3/24/1 10:37 2:05 9/24/1 16:08	& C		No	then circle No	a for "Pumpf	auk & enjer		e & Quantity
ot No <u>SOLO</u> Pump ID Sample Air Start Date Sample Air Start Time Sample Air Start Flow (L/min) Sample Air Stop Date Sample Air Stop Time Sample Air Stop Flow (L/min) Pump Fault	\$2.75 3/24/1 10:37 2:05 3/24/1 16:09 19/	S NA		No	then circle No	a for "Pumpf	auk & enjer		e & Quantity
ot No SON ON Pump ID Sample Air Start Date Sample Air Start Time Sample Air Start Flow (Limin) Sample Air Stop Date Sample Air Stop Time Sample Air Stop Flow (Limin) Pump Fault Sample Total Time (min)	8278 3/24/1 10:37 2:05 3/24/1 16:00 15/1	S NA		No	then circle No	a for "Pumpf	auk & enjer		e & Quantity
ot No Sel O Pump ID Sample Air Start Date Sample Air Start Time Sample Air Start Flow (Limin) Sample Air Stop Date Sample Air Stop Time Sample Air Stop Flow (Limin) Pump Fault Sample Total Time (min) Sample Quantity (L)	8278 3/24/1 10:37 2:05 3/24/1 16:00 15/1	S NA		20	then circle No	Yes	auk & enjer		e & Quantity

For Fleid Team Completion. Completed by ______ QC by:_____ For Data Entry: Entered by _____ QC by:_____

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	more than	
4.31	ieet No	

ANACONDA FIELD SAMPLE DATA SHEET (FSDS) FOR PERSONAL AIR

School:	Headstart	Lincoln Mod	<u>dry High Mer</u>	norial .	Sampling	Oate: 5 /	24/18	
Č	lther				Field Logb		0.1	
					Page No:	Co.		

Data Item					8			3	
Sample ID	Heads	+2	3						
Sampling Activities (circle all that apply)	Surface, Cell Baller, Room, HVS3 Elopi Other	Light Fix			Selling Tile, A om, Light Fixt or			Celling Tile, iom, Light Fi ior	
	Başamant G Tat Floor 2nd Main Floor Other				l, Graund Flo 2nd Floor, 3i f			it, Ground/F , 2nd Flogr, or	
Sample Venue	Iridabr Or	atdoor	Boin NA	Indoor	Outdoor I	Join NA	Indoor	Oyldoor	But NA
Sample Type	Œ5 F8 I	.B Oth	¥f	FS F8	LB Office	<u></u>	FS FE	LB OR	l6[
Personnel Information: IDName_C456	ued		'n	ask Seed	4444				
Sample Air Type	NA PA-EXC	PA-10	9	NA PA-E	XC PA-TWA		NA PAS	EXC PA-TVI	/A
Flow Meter Type	NA Roi	ameler	(DryCal	NA I	Rotameter	DryCal	NA 1	Rotamater	DryCal
Cassette .ot No Solos	Flow Meter	ID / ' '	901		(For Blanks "Z then circle No			ample Air Stop O for Total Tin	
Pump ID	80800	······		Ĭ					
Sample Air Start Date	3/24/1					7,7			
Sample Air Start Time	701.57					///			
Sample Air Start Flow (Umin)									
Sample Air Stop Date	3124/16		.4		h			. L	
Sample Air Stop Time	10/09								
Sample Air Stop Flow (Limin)	2.03				7				
Pump Fault	(NO)	NA	Yes	No ,	NA NA	Yeş	No	NA.	Yes
Sample Total Time (min)	3/3/			7					***************************************
Sample Quantity (L)	6.75								
Field Comments									
Cassette Lot Number: (circle) 50609									
Other									

Für Fleid Team Completion: Completed by: St. QC by: Por Data Entry: Entered by: QC by:

Sheet No.

ANACONDA FIELD SAMPLE DATA SHEET (FSDS) FOR PERSONAL AIR
School: (Headstart / Lincoln | Moodry | High | Memorial | Sampling Date) | 3 - 2 - 4 - (\$

Other		-				d Logbool je Na: - (s			
Data item		1			2			3	
Sample ID	Heads	124						7	
Sampling Activities (circle all that apply)	Surface, Ce Boller Roor HVS3 Floor Other	n. Liaht Fix			Celling Tile, om, Light Fö or			Seiling Tile, / om, Light Fix or	
Location Description ((circle all that apply)	Bassequent 1st Flagur 2 Main Floor Other	Ground Fir nd Floor, 3	ior) rd Floor,		t, Ground Fli 2nd Floor, 3 r			, G/ound Flo 2nd Floor, 3 r/	
Sample Venue	(indoor	Dutdoor	Both NA	Indoor	Outdoor	Both NA	Indoor	Outdoor	Both NA
Sample Type	(F3) FB	LB Othe	u	FS FB	LB Oth	Sr	FS/FB	L8 Othe	н
Personnel Information: ID_24 Name_≥ /		4	T	86k <u>864.</u>	*1,2.34 G				
Sample Air Type	NA PA-E)	C PA-TV	Α	NA PA-E	XG PA-TW	A	NA PAE	XC PA-TW/	١.
Flow Meter Type Cassette .ot No 50609	NA R	otameter r ID	OryCal C C /	NA I			rhy IO" to "So	Rotometer Imple Air Stop I O for Total That	
Pump ID	827.5								
Sample Air Start Date	3/2	1// 8							
Sample Air Start Time	0.37					100	ś		
Sample Air Start Flow (Limin)	203					\mathbb{Z}/\mathbb{Z}			
Sample Air Stop Date	872.777)							
Sample Air Stop Time	10.00					1			
Sample Air Stop Flow (L/min)	2,00								
Pump Fault	<16>>	NΑ	Yes	No	NA	Yes	No	NA	Yes
Sample Total Time (min)	331					1			
Sample Quantity (L)	667					1			
Field Comments									
Cassette Lot Number: (circle) 90609) Other									
v 032118	<u> </u>			Lab. k	(otahdin	Air Filter C	Nameter = 37	'mm; Pore Siz	e = 0.8µm

For Data Entry:

Entered by:

For Field Team Completion Completed by 3.15

QC by

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7	COIN LIVIOO	ary i mic	<u>ıh i Memar</u>	<u>ial</u>		impling Dal			
Other		sta.				eld Logboo			
					Pa	ige No. <u>6</u>			
Data Isam					2			3	
Sample ID	weed	4.20	5		•				
Sampling Activities (circle all that apply)		n, Light Fl	Air Vent, eture, Attic,			, Air Vent, ixture, Attic,		Celling Tile som, Light F ser	
Location Description (circle all that apply)	Bayapuant Tet Floo) 2 Mem Floor Other	Ground F nd Floor,	loor 3rd Floor	Basemet 1st Floor Main Flor Other	it, Ground F 2nd Floor, x			nt, Ground F , 2nd Finor, or	
Sample Venue	(findop) (Juldoor	Both NA	fridout	Outdoor	Both NA	(ndoot	Ouldoor	Both N
Sample Type	€8 FB	LB OII	ner	F8 FE	LB Of	her	FS FI	LB/O	her
Personnel Information: ID <u>25</u> Name N P		4	7	ask****					
Sample Air Type	NA PA-E	C PA-T	Na	NA PA	EXC PA-T\	VA.	NA PA-	exc pain	VA.
Flow Mater Type	NA R	otameter	(DryCal	NA	Rotameter		NA	Rotumeter	
Cassette .ot No. 50609	Flow Mete	er ID <u> [[</u>	301			"Z" through "Fi NA for "Pump Fi			
				444	reserve energies	uniter combin	run" es enue	un Thai sosan se	ne a Quantit
Pump ID	965	V 2			EGED CITES	wajor rumpr	nun esente	ruga rota n	ne & Quantit
					Tren totale	wasse rumpe	nun esene	rugaramii	ne & Quantit
Pump ID	965				uyen Linde	sajor rumpr	nur sente	<u>- гаргиона п</u>	ne & Quaetit
Pump ID Sample Air Start Date	96.83 51.24 70:37				Sign Strate	NAJOF FUMP?	our senie	3	ne & Quantit
Pump ID Sample Air Start Date Sample Air Start Time Sample Air Start Flow (Umin)	9633 3124 10:37 2.03	(16			3/40) \$1038	MAJOF TUMP F	nur a ente	3	ne & Quantif
Pump ID Sample Air Start Date Sample Air Start Time	96.33 31.24 10:37 2.03 3/24	(16			24(2) 5.0738	NAJOF FUNDE	nur a ente	3	ne & Quantif
Pump ID Sample Air Start Date Sample Air Start Time Sample Air Start Flow (Limin) Sample Air Stop Date Sample Air Stop Time	9633 3124 10:37 2.03 3/24 16:0%	(16			3/403 \$10 38	NAJOF PUMP P	nur a ente	3	ne & Quantif
Pump ID Sample Air Start Date Sample Air Start Time Sample Air Start Flow (Limin) Sample Air Stop Date	96.33 31.24 10:37 2.03 3/24 16:08	(16	Yes	No	NA	Nes Pamp P	No	NA	rie & Quaritit
Pump ID Sample Air Start Date Sample Air Start Time Sample Air Start Flow (Limin) Sample Air Stop Date Sample Air Stop Time Sample Air Stop Flow (Limin)	9633 3124 10:37 2 03 3/24 16:06 4.07	18	Yes	No					
Pump ID Sample Air Start Date Sample Air Start Time Sample Air Start Flow (Limin) Sample Air Stop Date Sample Air Stop Time Sample Air Stop Flow (Limin)	9633 3124 10:37 2:03 3/24/ 16:05 4:07	18	Yes	No					
Pump ID Sample Air Start Date Sample Air Start Time Sample Air Start Flow (Limin) Sample Air Stop Date Sample Air Stop Time Sample Air Stop Flow (Limin) Pump Fault Sample Total Time (min)	9633 3124 10:37 2.03 3/24/ 16:06 4.07	18	Yes	No					
Pump ID Sample Air Start Date Sample Air Start Time Sample Air Start Flow (Limin) Sample Air Stop Date Sample Air Stop Time Sample Air Stop Flow (Limin) Pump Fault Sample Total Time (min) Sample Quantity (L)	9633 3124 10:37 2.03 3/24/ 16:06 4.07	18	Yes	No					

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Other	ngoln Moodry High Memor	Field Logbook	
Sampling Team: ÇDM	Smith OtherNam	Page No: <u>7</u> e(s): <u>Navncy Podo Pa</u>	24
Data Item	1	2	3
Sample ID	HVSandblante		
Location (e.g., room number, etc.)	Head Start		
Sample Group (circle)	Bare Floor: Tile, Laminate, Wood Carpet: Plush, Level Loop, Multilavel, Shag, Floor Mal Other N. H	Bare Floor: Tile, Laminate, Wood Corpet: Plush, Level Loop, Multilevel, Shag, Floor Mat Other	Bare Floor: Tile, Laminate, Wood Carpet: Plush, Level Loop, Multilevel, Shag, Floor Mat Other
Location Description (circle)	Basement Ground Floor 1* Floor, 2*d Floor, 3*d Floor, Main Floor Other 1/1	Basement, Ground Floor, 1* Floor, 2*d Floor, 3*d Floor, Main Floor Other	Basement, Ground Floor, 1 st Floor, 2 st Floor, 3 st Floor, Main Floor Other
Matrix Type (circle)	Floor Dust Tracked in Dirt Other 5//2/5 \$2/10	Floor Dust Tracked in Dirt Other	Fidor Dust Tracked in Dirt Other
Category (dircle)	FS_D-(duplicate)_RB-(rinsate) SB-(sand blank)	FS D-(duplicate) R8-(rinsate) S8-(sapd blank)	FS D (duplicate) RB (rinsate) SB-(sand blank)
Sample Parent ID (if a duplicate sample)		5	
Approximate Sample Area (circle units)	MA cm² m² in² ft²	cm² m² in² ft²	cm² m² in² it²
HVS3 Vacuum ID No.	<i>N</i> /+	1/1/	· ·
Leak Check? (circle)	No Yes	No Yes	No Yes
20 sec cleaning @ end? (circle)	No Yes	No Yes	No Yes
Total Sample Time	<u>AA</u> minutes	minutes	minutes
Flow Drop	////_inches of water	inches of water	inches of water
Nozzie Drop	1/1/1 inches of water	inches of water	inches of water
Field Comments Bottle Lot Number: (circle) 1219755 1213332	11:05 9.05 5 mms		
Other		J	
/ 03211B		Lab: CLP Container: I	iVS3 Catch Bottle = 250 mL LDPE
For Field Team Comptetion Initials)	Completed by: 1	For Data Entry Entered by: QC by:	

Sheet No.: # 2

ANACONDA FIELD SAMPLE DATA SHEET (FSDS) FOR HVS3 FLOOR DUST Sampling Date: 3/24/2018 School: [Headstart/Lincoln | Moodry | High | Memorial | Field Logbook No: Other Page No: (2) 7 Name(6): Ba Simpson Sampling Team (CDM Smith Other 3 Data Item Head of HV Floor 004 Head St HV Floor 002 Head St HV Fl matoo2 Sample ID upstars /250 floor hall way Newnostairs / ground floor Back Book Location (e.g., room number, etc.) hallney <u>Bare Floor</u>: Tile, Laminate, Wood Bare Floor: Tile, Laminate, Wood Bare Floor: Tite, Laminate, Wood Sample Group Carpet)Plush, Level Loop, Carpe Vilush, Level Loop, (Carpet) Plush, Level Loop, Malinavel, Shaq, Floor Mat Müllilevel, Shan, Floor Mat Multilovel, Shag, Floor Mat. (circle) Other Other Other Basement (Ground Floor, 1) Basement, Ground Floor, Basement, Ground Floor, Tal Floor) 2nd Floor, 3nd Floor, 1º Floor, 2º Floor, 3º Floor, 1st Floor, 2nd Floor, 3nd Floor, Location Description Main Floor Main Floor Main Floor (circle) Other Split grown 12" steel Other Other: (Floor Dust) Floor Dust 1 Floor Dust Matrix Type Tracked in Dirt Tracked in Dift (Tracked in Diri 🕽 (circle) Other Other (FS) D (duplicate) RB (rinsate) (FS) Di(dupicate) RB (meste) FS) D-(duplicate) R8-(rinsate) Category (circle) SB (sand blank) S8-(sand blank) S6-(sand blank) Sample Parent ID MA-MHMH(if a duplicate sample) ЯÔ omi mi mi (C) cm² m² in²(ft²) Approximate Sample cm² m² m²(ff) Area (circle units) والعار والمكلك ß ß HVS3 Vacuum ID No. Leak Check? (circle) No No Yes) No Yes Yes 20 sec cleaning @ end? Nes Yes No Yes No. No (circle) 17 minutes minutes minutes **Total Sample Time** 5 5 inches of water inches of water inches of water Flow Drop lo 10 10 inches of water inches of water inches of water Nozzle Drop 39.09 - 60171c 39.02 % = 39,12° = **Field Comments** bothe tore weight 54.00 g = final weight bothe weight **Bottle Lot Number:** 45.278 = frink (circle) **12197**65 . 47,58 8 = final 1212332 Other Decon P 10:30 Decon @ 11:45 becan e 12:45 Lab CLP Container: HVS3 Catch Bottle = 250 mt, LDPE v 032118 Completed by: 124

For Data Entry

Entered by:

QC by:

For Field Team Completion

QC by: 2/2_

(Initials)

Sheet No. 3

ANACONDA FIELD SAMPLE DATA SHEET (FSDS) FOR HVS3 FLOOR DUST School: (Headstart | Lincoln | Moodry | High | Memorial Sampling Date: 3/3-4/3/08 Field Lagbook No: (2) Other Page No: () # 7 Sampling Team: CDM Smith Other Name(s): Cowere Kealer Data Item 1 3 , 11001 HEADST HUFLOOK DO'Y Henost HV FLOR DOS HEADSTH/LOUVED Sample ID Location CINSSRUM 3 140 Floor CHILDROYS LOUVER FLOOR (e.g., room number, etc.). V 157 F/307 LIBRIDGE RESTERM <u>Baro I Izor</u> / Tilej Laprinade, Voco Bare Floor: Tile, Laminate, Wood Bare Floor; Tile, Laminate, Wood Sample Group Carpet Plush, Level Loop, Carpet Plush, Level Loop, Carpet Plush, Level Loop, Mullievel, Shaq, Floor Mat. Multilevel, Shag, Floor Mat Mattliével, Shaq, Floor Mat (circle) Other Other Other Basement, Ground Floor, Basement, Ground Floor, Basement, Ground Floor, Location Description (Floor, 21th Floor, 3th Floor, C Floor, 2rd Floor, 3rd Floor, PFFiger, 2rd Floor, 3rd Floor, Main Floor Main Floor Main Floor (circle) Other Other Other Floor-Dúst Moor Dust Kloor Duel Matrix Type Tracked in Dirt Tracked in Dirt Tracked in Dirt. (circle) Other Other Other (F) D-(duplicate) RB-(rinsate) (C) D-(duplicate), R8-(misate) FD D (duplicate) RB (meate) Category (circle) SB-(sand blank) SB-(sand blank) SB-(sand blank) Sample Parent ID (if a duplicate sample) 65 160 12-9 Approximate Sample cm² m² in² fe on minimite cm² m² lo/ft²/ Area (circle units)

Flow Drop S inches of water S inches of water S inches Nozzle Drop /o inches of water /O inches of water IO inches Field Comments State 38.86 9 Decom 8 12.35 DVSS & HEADANING ALL TO SERVICES OF STATE			1	
20 sec cleaning @ end? No (re) No (as) No (as) Total Sample Time 13.5 minutes 3.3 minutes 2.5 minutes Flow Drop 5 inches of water 5 inches of water 9 inches Nozzle Drop 70 inches of water 10 inches 10 in	/IVS3 Vacuum ID No.	A	1-1	Print Control
Total Sample Time 13.5 minutes 3.5 minutes 5.5 minu	_eak Check? (circle)	No (Yes	No Que	No (Yes)
Flow Drop Some Some Some Some Some Some Some		No (Ya)	No. Q	No (G)
Nozzle Drop / o inches of water / O inches of wat	Fotal Sample Time	IS minutes	<u>\$3</u> minutes	———— minutes
Field Comments START LIGHT START ST	Flow Drop	5 inches of water		
Bottle Lot Number: Strate 1147 START LOSGUS 38 98 HEROSTHIFFE (circle) Strate 1147 START LOSGUS 38 98 HEROSTHIFFE (circle) Strate 1247 Strate Losgous Current Culy 1, E HEROSTHIFFE (185) 48, 1251 START START 1351 48, 1351 START START START 1351 START START START 1351 START START START 1351 START STAR	Nozzle Drop	/ o inches of weter	1/2 inches of water	
r 032118 Lab: CLP Container: HVS3 Catch Bottle = 250 ml. L	Bottle Lot Number: (circle) 1219785 1213332	STARTE HAS	START LOYENT: 38 95 STORT INTO ENGRESO IMPORTATION OUTS. ENTANDED TO LONDONAME TO SANTONE CONTON	ADDED DUE TO ENSURESEEN DUSS & HEADSTHY FLORED STREET WEEKS: 39023 STREET STREET HS.413
For Field Team Completion Completed by For Data Entry Entered by:	032118		Lab: CLP Container:	HVS3 Catch Bottle = 250 ml. LDPE
	ield Team Completion in)	ac by:	For Date Entry Entered by QC by:	

Sheet No. ____

Other		Field Logbook Page No: <u>(</u>	
Sampling Team: CDM	Smith) Other Name	=(s): <u>Ben Simpson</u>	
Data Item	1	2	3
Sample ID	Head SHHVF1 mat 00 2 D	Head St HV Floor OOD	Head SHAV Floor DOJ
Location (e.g., room number, etc.)	BACK Low	Classroom 1	Class room 2
Sample Group (circle)	Bare Floor: Tile, Laminate, Wood Carpet Plush, Level Loop, Multilevel, Shag, Floor Mat Other	Bare Floor Tile≯Laminate, Wood Carpet⊁Flush, Level Loop, Multilevel, Shag, Floor Mat OtherTilles + rwy	Garg Floor: Tile Laminate, Wood Carpel: Plush, Level Loop, Mullilevel, Shag, Floor Mat Other 五元は イイムケ
Location Description (circle)	Basement, Ground Floor, 1st Floor, 2st Floor, 3st Floor, Main Floor Other (pt. + 2st/2st Floor)	Basement (Ground Floor) 1 st Floor, 2 nd Floor, 3 nd Floor, Main Floor Other	Basement, Ground Floor 1 st Floor, 2 ^{re} Floor, 3 rd Floor, Main Floor Other
Matrix Type (circle)	Elapr Dust Tracked in Dirt Other	Floor Bust Tracked in Dirt Other	(Floor Dust) Tracked in Dirt Other
Category (circle)	FS (D-(duplicate)) R8-(rinsate) SB-(sand blank)	D-(duplicate) R8-(rinsate) S8-(sand blank)	(FS) D-(duplicate) R8-(rinsate) S8-(sand blank)
Sample Parent ID (if a duplicate sample)	Head St HV Flroat OO2	NA	NA
Approximate Sample Area (circle units)	6cm² m² in² @	210 cm ² m ² in ² (ft ²)	<u>246</u> cm² m² in²€
HVS3 Vacuum ID No.	B	β	/3
Leak Check? (circle)	No (Yes)	No (Yes)	No (Yes)
20 sec cleaning @ end? (circle)	No (Yes)	No (Yes)	No (Yes)
Total Sample Time	4 minutes	14 minutes	15 minutes
Flow Drop	5 Inches of water	5-6 inches of water	5 inches of water

For Field Team Completion	Completed by: BF	For Data Entry	Entered by: QC by:
v 032118		Lab: CCP	Container: HVS3 Catch Bottle = 250 mL LDPE

Decom @ 13:20 Decom @ 1355

inches of water

inches of water

Flow Drop

(circle)

Other

Nozzle Drop

Field Comments

Bottle Lot Number:

(219755) 213332

76

Decon @ 1445

inches of water

39.249 = bottle 39.16 = bottle 39.14 = bottle weight 47.229 = final 46.54 = final weight weight weight

inches of water

Sheet No.: (5)

ANACONDA FIELD SAMPLE DATA SHEET (FSDS) FOR HVS3 FLOOR DUST Sampling Date: _3/34/1€ School: Headstart | Lincoln | Moodry | High | Memorial Field Logbook No. Other Page No: _ Name(s): Convox Kerrer Sampling Team: QDM Smith Other 1 Data Item Head SHIVFIm at Rinsateons HEADERANTHOROOG HERosy MY FU YJAY 400. Sample ID Henograpus. 640 Fear pool N/A Location 157 Flows CLIACERCOM H (e.g., room number, etc.) Bare Floor: Tile, Caminalle, Wood Bare Floor: Tile, Laminate, Wood Bare Floor: Tile, Laminate, Wood Sample Group Carpet Plush, Level-Loop Multilevel, Shag, Ploor Max Carpet: Plush, Level Loop, Carpel Plush, Level Loop. Multilevel, Shag, Floor Mat. Multilevel, Shaq, Floor Mat (circle) Other Other Other Basement, Ground Floor, Basement, Ground Floor, Basement, Ground Floor, (J^{ar} Floor, 2rd Floor, 3rd Floor, **)*floo)**, 2" Floor, 3" Floor, 1st Floor, 2st Floor, 3st Floor, Location Description Main Floor Main Floor Main Floor (circle) Other Other Other Floor Duil Floor Dust Floor Dust Matrix Type Aracked in Dig Tracked in Dirt Tracked in Dirt. (circle) Other Kinskill Sand Other Other FS D-(duplicate) (RB-(dosato)) TS) D-(duplicate) RB-(rinsate) (FS)D-(duplicate)_RB-(rinsate) Category (circle) SB-(sand blank) SB-(sand blank) SB (sand blank) Somela Parent IN

Approximate Sample Area (circle units) HVS3 Vacuum ID No. Leak Check? (circle) 20 sec cleaning @ end? (circle)	180_cm² m² ln² (16) cm² m² in A No No	β
Leak Check? (cirdle) No 20 sec cleaning @ end?	A O		29 %
20 sec cleaning @ end?	Ø€) 	No (75)	- //
	No. of the second secon		No (Yes.)
7 vvv v v v y	(Yes)	No 🐷	No (Yes)
Total Sample Time	2-5 minutes	minutes	minutes
Flow Drop	5 inches of water	5 inches of w	veter O inches of water
Nazzie Drop	/O_inches of water	onches of w	rater <u>a</u> inches of wete
Field Comments Bottle Lot Number: (circle)	ineswessis: 39.00g ENO: 48.06g Decon@ 1430	STORTENS WESTERNY	134 48 59 = End
1213332 Other		Decomp, 1535	47.54 = weight after going through sample tax

				29.7
		4.4		
50.7Y	wat.	No.		W. S
		***	*********	

ANACONDA FIELD SAMPLE DATA SHEET (FSDS) FOR PERSONAL AIR

chool: <u>Headstart Lind</u> Other	ANT THEODY	1.3.1.121			Field	Logbook	No		
					Page	No:/	04.11		
Data Hem		1			7			J	
Sample ID	JS Hg	l Br	Dayl						
Sampling Activities (circle all that apply)	Surface, Cell Boller Room HVS3 Floor Other	Ing Tile, A Light Fool	is Vent, ure, Altic.	Surface, Co Bailer Roon HVS3 Floor Other	i, Light Fixtu	r Vent, ire, Attic.	Surface, Ce Boiler Roon HVS3 Floor Other	i, Light Fixtu	
Location Description (circle all that apply)	Bosement, C 1st Floër, 2h Main Floor Other <u>6</u>	iround Flo d Floor, 3i	or, d Floor,	Basement, (1st Floor, 2t Main Floor Other	Ground Floo nd Floor, 3rd	ir, I Floor,	Basement, i 1st Floor, 2i Main Floor Other	Ground Floo nd Floor, 3rd	r, I Floor,
Sample Venue	/Indoor O		Both NA	Indoor C	Juldoar B	oth NA	Indoor (Outdoor B	oth NA
Sample Type	FS (FB)	LB Othe	п	FS FB	LB Other		FS FB	LB Other	
Personnel Information: /	Hill		1	ask					
Sample Air Type	NA PA-EX	C PA-TV		NA PA-EX			NA PAEX		
Flow Meter Type	NA R	otameter	DryCal	NA R	stameter	DryCal		otameter	DryCe
Cassette _ot No	Flow Mate	rID 🔻 🔻	W		(For Blanks "Z Wen afrale NA	" (for "Pump)	ump 10" to "Sor 'ault" & enter 0	ipie no stop i for Total Time	& Quantity
Pump ID			Ţ.						
Sample Air Start Date									T
Sample Air Start Time									
Sample Air Start Flow (Umin)								
Sample Air Stop Date		7							1
Sample Air Stop Time	1 1								
Sample Air Stop Flow (Limin	ıl /								
Pump Fault	No	NA	Yes	No	NA	Yes	No	NA	Yes
Sample Total Time (min)									
Sample Quantity (L)									
Field Comments		71	. (.						
Cansette Lot Number: (circle) 50609	Field								
Other									
x							r Diameter = 3		

QC by:

Entered by:

For Data Entry

QC by.

For Field Team Completion. Completed by

			/"X	
Sh	æ	t No		

ANACONDA FIELD SAMPLE DATA SHEET (FSDS) FOR PERSONAL AIR

School:	Headstart	<u> I Lincain I Mooc</u>	γ√ [High] Mei	norial .	Sampling Date: 3	25/18
	Other				Field Logbook No: _	<u>01' </u>
					Page No: <u>/ 0 // /</u>	

Sampling Activities (circle ali that apply) Location Description (circle ali that apply) Sample Venue Sample Type Personnel Information: ID Name S. Serv. Sample Air Type Flow Meter Type Cassette .ot No Flow Pump ID	nent, Ground Fr per 2nd Floer Poor ar Outdoor FB LB Oth	Air Vent, xture, Attic, secr., 3rd Floor, Both NA	Baller Ro HVS3 Fic Other Basemen 1st Floor Main Floo Other Indoor FS FB ask NA PA-I	it, Ground Fli 2nd Floor, 3 or Ouldoor LB Oth EXC PA-TW Rotameter	cture, Attic, cor, ird Floor, Both NA sr	HVS3 Floo Other Basement, 1st Floor, 2 Main Floor Other Indoor FS FB NA PA-E2	m, Light Flor Ground Floor, S Outdoor LB Oth C PA-TW Rotameter	xture, Attic, loor, 3rd Floor, Both NA ier
Sampling Activities (circle all that apply) Location Description (at Floring Circle all that apply) Sample Venue Personnel Information: ID 20 Name 5.5000 Sample Air Type NA Flow Meter Type Cassette of No Flow Pump ID 86	Room, Light Fit Fijaor Fijaor nent, Ground-Fi par, End Floor Outdoor FB LB Oth PAEXC #A-TV Rotameter	xture, Attic, Sacres lear, 3rd Floor, Both NA	Baller Ro HVS3 Fic Other Basemen 1st Floor Main Floo Other Indoor FS FB ask NA PA-I	om, Light Filion It, Ground Flicor, 3 F Ouldgor LB Othe EXC PA-TW Rolameter	cture, Attic, cor, ird Floor, Both NA sr	Boller Roo HVS3 Floo Other Basement, 1st Floor, 2 Main Floor Other Indoor FS FB NA PA-E2	m, Light Flor Ground Floor, S Outdoor LB Oth C PA-TW Rotameter	xture, Attic, loor, 3rd Floor, Both NA ier
Location Description (sir Fig. (circle all that apply) Main F Other. Sample Venue trido Sample Type FS Personnel Information: ID 20 Name 5. Serv. Sample Air Type NA Flow Meter Type NA Cassette .ot No Flow Pump ID 86	nent, Ground Floor, Placer, Placer ar Outdoor FB LB Oth ASSOCIATION PARKS PATY Rotameter	lear, 3rd Floor, Both NA eer T	1st Floor, Math Floo Other Indoor FS FB ask_ NA PA-I	2nd Floor, 3 or Ouldoor LB Oth LB Oth EXC PA-TW Rolameter	Both NA	Basement, 1st Floor, 2 Main Floor Other Indoor FS FB NA PA-E2	≳nd Floor, (Outdoor LB Oth (C PA-TW Rotameter	3rd Floor, Both NA ier
Sample Type Personnel Information: ID 20 Name 5. Serv Sample Air Type NA F Flow Meter Type NA Cassette ot No Flow Pump ID 86	PB LB Oth OSCIL PA EXC PATY Rotameter	ierT	FS FB	LB Oth XC PA-TW Rotameter	BI A DryCal	FS FB NA PA-EX NA F	LB Oth (C PA-TW Rotameter	ier /A DryCal
Personnel Information: ID 20 Name 7 Service Sample Air Type NA Flow Meter Type NA Cassotte Lot No Flow Pump ID 86	<u>ASSA</u> PAEXC <u>₹A-TV</u> Rotameter	T Cav	ask	EXC PA-TW Rotameter	A DryCal	NA PA-E) NA F	KG PA-TW Rotameter	/A DryCal
Name Service Service	PA-EXC #A-TV Rotameter	W.	NA PAI	Rotameter	DryCal	NA F	Rotameter	DryCal
Flow Meter Type NA Cassette .ot No Flow Pump ID 86	Rotameter			Rotameter	DryCal	NA F	Rotameter	DryCal
Cassette Flow .ot No Flow Pump ID 8 6		< DryCal	NA.					
ot No Flow Pump ID 8 (o	80-1			(Erre Mirasiles *				
Pump ID 8 (e	weeru //c	207			Z" through "Pu 'A for "Pump Fi			
	8003						-	
~~ · · · · · · · · · · · · · · · · · ·	27//8							
Sample Air Start Time								
Sample Air Start Flow (Limin) 2. 6	3							
	25//8	_1						
Sample Air Stop Time / 60								
Sample Air Stop Flow (L/min)								
Pump Fault (Ng)	NA NA	Yes	No	NA	Yes	No	NA	Yes
Sample Total Time (non) 4/	//							
Sample Quantity (L)	15							
Field Comments Cassette Lot Number: (circle) 50609								
Other								

For Field Tearn Completion: Completed by: QC by: For Data Entry: Entered by: QC by:_____

Sheet No.______

ANACONDA FIELD SAMPLE DATA SHEET (FSDS) FOR PERSONAL AIR Sampling Date: 3/25/19 School: Headstart | Lincoln | Moodry | (High) Memorial Other_

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- 8	1	C3	H.	١.	Ł.,	87	3.1	١.,	۳.,		33,		N	١,	١.	8		ಿ	*	×	Ĭ.												
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		73.8			- 57	18.8				2.3	800	100	83		8.	3																	

Data item		- 1			2			3	
E/3F9 Renii									
Sample ID	JS#	gna	Į						
Sampling Activities (circle all that apply)	Surface, Ce Boiler Roor HVS3 Floor Other	n, Light Fix	ture, Attic,		Celling Tilla, 7 om, Light Fix or			elling Tile, A m, Light Fixt ir	
Location Description ((circle all that apply)	Baseggent, 1st Floor 2 Main Floor Other				, Ground Fik 2nd Floor, 3 (Ground Flo Ind Floor, 3s	
Sample Venue	Indogr	Outdoor	Both NA	Indoor	Outdoor	Both NA	Indoor	Outdoor f	Both NA
Sample Type	/fs)FB	LB Othe	V	FS FB	LB Othe	т	FS FB	LB Othe	ſ
Personnel Information: ID_2/Name_S. K	////		1 1 1 T	ask					
Sample Air Type	NA PA-E	C (PA IV	77	NA PA-E	XC PA-TW	4	NA PA-E	XC PA-TW/	
Flow Meter Type	NA F	lotameter	(DryCal)	NA	Rotameter	DryCal	NA I	Rotameter	DryCal
Cassette .ot No	Flow Mete	er ID <u>//<i>0</i>4</u>	2/					mple Air Stop i Lijoe Total Time	
Pump ID	827	500							
Sample Air Start Date		5//8			,				
Sample Air Start Time	9.70								
Sample Air Start Flow (L/min)	2.01								
Sample Air Stop Date	3/25	1/8			·				
Sample Air Stop Time	1611								
Sample Air Stop Flow (Limin)	24/								
Pump Fault	/No)	NA	Yes	No	NA	Yes	No	NA	Yes
Sample Total Time (min)									
Sample Quantity (L)		2							
Field Comments									
Cassette Lot Number: (circle) 50609									
Other									
v 032118	£			Lab	Catandin	Als Filter I	Diameter = 37	inn, Pare Siz	re = 0.8µm

QC by_ For Field Team Completion: Completed by QC by:_ For Data Entry: Entered by _

ANACONDA FIELD SAMPLE DATA SHEET (FSDS) FOR PERSONAL AIR

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School:	<u>Headstart I</u>	<u>Lincoln Moodry</u>	(High Memorial	Sampling Date: <u>ろ</u>	25/78
	Other			Field Logbook No	
				Page No: // / /	
				W amakati makamata	
	Data Item		1	9	3

Data Item	1	2	3
Sample ID	JsHigh 23		
	7		
Sampling Activities (circle all that apply)	Surface, Ceiling Tile, Air Vent, Boller Room, Light Fixture, Affic, HVS3 Floor Other	Surface, Ceiling Tile, Air Vent, Boiler Room, Light Fixture, Attic, HVS3 Floor Other	Surface, Ceiling Tile, Air Vent, Boiler Room, Light Fixture, Attic, HVS3 Floor Other
Lecation Description (circle all that apply)	Basement, Ground Floor, 18 Floor, 2nd Floor, 3rd Floor, Main Floor Other	Basement, Ground Floor, 1st Floor, 2nd Floor, 3rd Floor, Main Floor Other	Basement, Ground Floor, 1st Floor, 2nd Floor, 3rd Floor, Main Floor Other
Sample Venue	/indoor Outdoor Bath NA	Indear Outdoor Both NA	Indoor Ouldoor Both NA
Sample Type	∱\$>FB LB Other	FS FB LB Other	FS FB LB Other
Personnel Information: ID_23Name	ke/legT	ask	
Sample Air Type	NA PA-EXC (A-TWA)	NA PA-EXC PA-TWA	NA PA-EXC PA-TWA
Flow Meter Type	NA Rotameter @ryCe/	NA Rotameter DryCal	NA Rotameter DryCal
Cassette .ot No	Flow Meter ID //06/		mp ID" to "Sample Air Stop Flow" sult" & enter O for Total Time & Quantity)
Pump ID	827 427		
Sample Air Start Date	3/25/18		
Sample Air Start Time	916		
Sample Air Start Flow (Limin)	2.01		
Sample Air Stop Date	3/25/18		
Sample Air Stop Time	1607		
Sample Air Stop Flow (L/min)	2.04		
Pump Fault	/No) NA Yes	No NA Yes	No NA Yes
Sample Total Time (min)	4//		
Sample Quantity (L)	832		
Field Comments			
Cassette Lot Number: (circle) 50609		. "	
Other			
, (V2014)		Lah Yaksistin - Air Filtor (Semator :: 37mm: Daro Siva × 6 Sum

v.032118

Lab. Katchdin — Air Filter Diameter = 37πm; Pose Size = 0,8μm

For Field Team Completion: Completed by: QC by: For Data Entry: Entered by: QC by:				
For Field Team Completion. Completed by OC by For Data Entity. Entered by OC by	and the second s		94-14 A-14 A-14 A-14 A-14 A-14 A-14 A-14	
	FOR FIRM LEARN LEARNING LONDON OV	OK. NV E POLITATO	enn ennenn	131 : MV
	000000	Annual Property of the Control of th	A	······

Sheet No.:

ANACONDA FIELD SAMPLE DATA SHEET (FSDS) FOR PERSONAL AIR

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Schoo	и. Heads	tart i Lincoln	<u> I Moodry ∤Higl</u>	n) Memorial	Sampling Date:	3/25/48
	Other		a	1000000	Field Logbook N	
					Page No. /⊘∦	/
					T. Carlotte	
	Danley House				9	4

Dala Rem	1	2	3
Sample ID	J5High 24		
Sampling Activities (circle all that apply)	Surface, Ceiling Tile, Air Vent, Boiler Room, Light Fixture, Attlc, HVS3 Floor Other	Surface, Coiling Tile, Air Vent, Boiler Room, Light Fixture, Attic, HV\$3 Floor Other	Surface, Ceiling Tile, Air Vent, Boiler Room, Light Fixture, Attic, HVS3 Floor Other
Location Description (circle all that apply)	Basement, Ground Floor, 1st Floor, 2nd Floor, 3rd Floor, Main Floor Other	Basement, Ground Floor, 1st Floor, 2nd Floor, 3rd Floor, Main Floor Other	Basement, Ground Floor, 1st Floor, 2nd Floor, 3rd Floor, Main Floor Other
Sample Venue	Indoor Outdoor Both NA	Indoor Outdoor Both NA	Indoor Ouldoor Bath NA
Sample Type	FSZ FB LB Other	FS FB LB Other	FS F8 LB Other
Personnel Information: ID <u>タリ</u> Name <u>ル</u> ・	DisciotaT	95k	
Sample Air Type	NA PAEXC (PATWA)	NA PA-EXC PA-TWA	NA PA-EXC PA-TWA
Flow Meter Type	NA Rotameter (DryCa)	NA Rotameter DryCal	NA Rotameter OnyCal
Cassette .ot No	Flow Meter ID //co/		mp ID" to "Sample Air Stop Flow" zult" & enter 0 for Total Time & Quantity)
Pump ID	827541		
Sample Air Start Date	3/25/70		
Sample Air Start Time	9:16		
Sample Air Start Flow (L/mie)	2.01		
Sample Air Stop Date	3/25/18		
Sample Air Stop Time	1607		
Sample Air Stop Flow (Limin)	2.63		
Pump Fault	∠No. NA Yes	No NA Yes	No NA Yes
Sample Total Time (min)	4//		
Sample Quantity (L)	82		
Field Comments			
Cassette Lot Number: (circle)			
Other			
v 032118		Lab: Katehdin Air Filler C	hameter = 37mm; Pore Size = 0.8µm

For Field Team Completion: Completed by ____QC by _____ For Data Entry, Entered by: _____QC by:_____

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ANACONDA FIEI School: <u>Headstart Lini</u> Other			X		Sar Fie	-OR PE mpling Dal Id Logboo Je No: <u>//</u>	le <u>2/2</u> k No. <u>1</u> 2	<u>5/10</u>	
Data Item		1			2			3	
Sample ID	J5 H	19112	5						
Sampling Activities (circle all that apply)	Surface, Co Ballet Roon IfWS3 Floor Other)	n, Light Fo			Ceiling Tife, oom, Light Fi oor			Celling Tile, om, Light Fi or	
Location Description (circle all that apply)	Basement⊱ Tet Floor ♥ Main Floor Other				nt, Ground Fl , 2nd Floor, S or			t, Ground Fi 2nd Floor, 3 F	
Sample Venue	fidoor (Duldoor	Both NA	Indoor	Outdoor	Both NA	Indoor	Outdoor	Both N/
Sample Type	FS 118	LB Oth	ør	FS FI	3 LB Oth	er	FS FB	LB Oth	er
Personnel Information: ID <u>25</u> Name <u>//</u>	Podelin			(ask					
Sample Air Type	NA PA-E)	C PA-TV	iλ)	NA PA	EXC PA-TW	IA.	NA PA-E	EXC PA-TW	/A
Flow Meter Type	NA R	otameter	ΦíyCal	T NA	Rotemeter	DryCal	NA	Rotameter	DryCa
Cassette .ot No	Flow Mete	ir ID 🏒	>6/			Z" through "Pi IA for "Pump F			
Pump ID	868	0.42							
Sample Air Start Date	·····	5//6							
Sample Air Start Time	9								
Sample Air Start Flow (Limin)	200								
Sample Air Stop Date	3 25	7.8			and the second				
Sample Air Stop Time	1607								
Sample Air Stop Flow (Umin)	2.03								
Pump Fault	(86)	NA	Yes	No	NA	Yea	No	NA	Yes
Sample Total Time (min)	67.	7							
Sample Quantity (L)	82								
Field Comments									

v 032118

Other_

Cassette Lot Number:

Leb: Katahdin

Air Filter Diameter = 37mm; Pore Size = 0.8µm

For Flate Team Completion: Completed by QC by For Data Entry Entered by QC by:
Pro-Files Town Committee Contracted Say OC has For Nate Entry Enterpot by FIC for
Positive Table Computation Computation for OC by Ear Date Entry Epiteract by CC by
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Particulation Associated the Article For Nate Entry - Engage by Article Article For Nate Entry
To State Form Association Associated the COS in For Care Entry Entered by OC by
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ANACONDA FIELD SAMPLE DATA SHEET (FSDS) FOR HVS3 FLOOR DUST Sampling Date: 3/25/2018 School: Headstart | Lincoln | Moodry [High] Memorial Field Logbook No. _______ Other Page No: _ J ○ ﴿ 7/ Name(s): Ben Simpson Sampling Team: (CDM Smith)Other Data Item J SHigh HVFloor 002 JSHigh HVFloor 602 DE JS Aigh HVFloor 602 Sample ID North Entrance (northwest) Location Make (e.g., room number, etc.) Bare Floor, Tile, Laminate, Wood Carpel Plush) evel Loop, Bato Floor: Tile, Lominate, Wood Bare Floor: Tile, Laminate, Wood Sample Group Carpet Plush) Level Loop. (Carpa) Plush, Level Loop. Multievel Shaq Floor Mat Multievel Shag Floor Mat Mullievel, Shag, Floor May (circle) Other Basement (Ground Floor,) Basement (Ground Floor,) Basement/Ground Floor 18 Floor, 205 Floor, 375 Floor, 1st Floor, 2nd Floor, 3nd Floor, **Location Description** 1º Floor, 2rd Floor, 3rd Floor, Main Floor Main Floor Main Floor (circle) فهلهك Other Other Other (Floor Dusi 🕽 Tioor Dust Floor Dust Matrix Type Tracked in Oirt Tracked in Dirt (Tracked in Dirt) (circle) Other Other Ölhar FS) D-(duplicate) RB-(rinsate) FS (<u>D (duplicate)</u>) RB (dusate) (FS) D-(duplicate) R8-(rinsate) Category (circle) SB-(sand blank) SB-(sand blank) SB-(sand blank) Sample Parent ID N/ρ JSHGKHVF100700A (if a duplicate sample) **14.05** 30 cm² m² in² (r) IÀ_cm² m² in²@ _cm² m² in/fr) Approximate Sample Area (circle units) N HVS3 Vacuum ID No. ĸ Nos Leak Check? (circle) No No (Yea) No 20 sec cleaning @ end? No Yes) Yes) No (circle) а minutes **Total Sample Time** minutes minutes 5 Flow Drop inches of water inches of water inches of water 10 10 10 Nozzle Drop inches of water inches of water inches of water 38.84, - Bobje **Field Comments** Bottle Lot Number: (circle) 66.98 Finel negrot 1219755 73.36= Fixel 74.11g = Fine! 1213332 Other Decon @ 0930

v 032118		Lab; CLP	Container: HVS3 Catch	Bollle = 250 mL LOPE
For Field Team Completion (Initials)	Completed by: B	For Data Entry	Entered by: QC by:	

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			8	8				×		0			š	0						×	8	9	٠	8	Ŗ	٠	×	۰	٠	٠	۶	٠	٠	۰	×	×	Š.

ANACONDA FIELD SAMPLE DATA SHEET (FSDS) FOR HVS3 FLOOR DUST

Other	coln (Moodry (High () Memor		s; <u>8/95/18</u> No: <i>01</i>
Value -		Page No. <u>/</u>	
Sampling Team. CDM	Smith Other Nam		
Data Item	1	2	3
Sample ID	JSHEGHHVELMETOUS	SSHIGHHUFL MATOOS D	FLOOR 909 ISHKEHMU SUAN GOOD Chooses
Location (e.g., room number, etc.)	GROUND SLOOK DY BRUD ROWN	GROWD FLOOR BY BAND ROOM	248 FLOOR ROOM 301
Sample Group (circle)	Bare Floor: Tile, Laminate, Wood <u>Carpet</u> : Plush, Level Loop, Multilevel, Shag, Floor Mat Other	Bare Floor: Tile, Laminate, Wood Carpet: Plush, Level Loop, Multilevel, Shag, Floor Mat Other	Bare Floor: Tile Caminats, Wood Carpet Plush, Level Loop, Multilevel, Shag, Floor Mat Other
Location Description (circle)	Basement, Ground Floor, 1st Floor, 2 nd Floor, 3rd Floor, Main Floor Other	Basement, Ground Floor, 1st Floor, 2 nd Floor, 3 nd Floor, Main Floor Other	Basement, Ground Floor, 1 st Floor, ^{(2nd} Floor) 3 ^{rt} Floor, Main Floor Other
Matrix Type (circle)	Floor Dust Cracked in Dirt Other	Floor Quat (Tracked in Birt Other	€joor Düşl Trackéd in Dirt Other
Category (circle)	(FS) D-(duplicate) R6-(rinsate) S6-(sand blank)	FS (Ø-(duplicatě) RB-(rinsate) SB-(sand blank)	FS D-(duplicate) RB-(rinsate) SB-(sand blank)
Sample Parent ID (if a duplicate sample)	NA	ISHSOHHVELMAR CONSU	NA
Approximate Sample Area (circle units)	6 referred me in (10)	ccm² m² in² 🏀	/50 and m3 in3 (f)
HVS3 Vacuum ID No.	4	A	7
Leak Check? (circle)	No (Ye)	NO /469)	No (Yes)
20 sec cleaning @ end? (circle)	No (Pa	No (Yes)	No (Yes)
Total Sample Time	3.5_minutes	2.5 minutes	20 minutes
Flow Drop	5 inches of water	5 inches of water	
Nozzie Drop	/C inches of water	10 inches of water	10 inches of water
Field Comments	STREET-RUCKHIS RION	STARTENGUER UT	STARTEND WEERS; 39,124
Eattla Lot Number: (circle) 1219755 1213332	J	END: 98,02	eno: 44.15
Other	Decove 0940	DECOND 0950	Decove 1030

For Data Entry

Entered by

Completed by: 7

For Field Team Completion

(Initials)

Other	ncoln Moodry (High)Memon	Field Logbook	
ampling Team CDM	Smith) Other Name	Page No: 10 (8): Be Simpso	
Data Item	1	2	3
Sample ID	JSHigh HVFbor001	JSHishHVFloor 003	JSHigh HV Floor 004
Location (e.g., room number, etc.)	Caleteria	Band room /103	Hallmay
Sample Group (drcie)	Bare Floor File) Laminate, Wood Carpet: Plush, Level Loop, Multilevel, Shag, Floor Mat Other	Gare Floor Tile Laminate, Wood Carpet Plush, Level Loop Multilevet, Shag (Floor Mat) Other Tile + Jack mat	Bare Floor Tile Laminate, Wool Carpet Plush, Level Loop, Multilevel, Shag, Floor Mat Other
Location Description (direle)	Basement, Fround Floor 1 st Floor, 2 st Floor, 3 rd Floor, Main Floor Other	Basement Ground Floor, 1st Floor, 2 nd Floor, 3 nd Floor, Main Floor Other	Basement, Ground Floor, 1 st Floor, 2 nd Floor, 3 nd Floor, Main Floor Other
Matrix Type (circle)	Floor Dust Tracked in Dirt Other	Floor Dust Tracked in Diri Other	(Floor Dust) Tracked in Dirt Other
Category (circle)	FS D-(duplicate) RB-(rinsate) SB-(sand blank)	FS) D-(duplicate). R8-(rinsata) SB-(sand blank)	F8 D-(duplicate) R8-(rinsate) S8-(sand blank)
Sample Parent ID (if a duplicate sample)	N/A	WA	N/A
Approximate Sample Area (circle units)	500 cm² m² in²(t²)	90 cm² m² in² (6)	450 cm ² m ² in 6
HVS3 Vacuum ID No.	8	В	13
Leak Check? (circle)	No (Yes)	No (Ye)	No (es)
20 sec cleaning @ end? (circle)	No (Yes)	No Yes	No (Yes)
Total Sample Time	28 minutes	8 minutes	
Flow Drop	5_inches of water	5 inches of water	5 inches of water
Nozzle Drop	10 inches of water	10 inches of water	10 inches of wate
Field Comments Bottle Lot Number: (circle)	38.89 g = Bottle Weight	39.10g = Bottle weight	38.94 = Bottle weight
(1219755) 1213332	46.148 = Frank Weight	54.03 = Final weight	
Other	Decor @ 1120	Decon @ 1230	Pecin @ 1300
y 032118		Lab: GLP Container: I	WS3 Catch Bottle = 250 ml, LDPE
For Field Team Completion (Initials)	Completed by: <u>W</u> QC by: <u>W</u>	For Data Entry Enlared by: QC by:	·

Sheet No.: 4

ANACONDA FIELD SAMPLE DATA SHEET (FSDS) FOR HVS3 FLOOR DUST

School: <u>Headstart Lir</u> Other	ncoln Moodry (High) Memor	Field Logbook	s: 3/25/18 No: 01 Ok 11
Sampling Team: CDM	Smith Other Nam	/"	
Data Item	1	2	3
Sample ID	JSHEGHHVFLOORON	SSHIGH HV FLOOROID	28 AZENHAKIONE OLT
Location (e.g., room number, etc.)	210 Rood RM \$12	I VO From Room 308	INDREA HALL
Sample Group (circle)	Bare Floor: Tile, Caminate: Wood Carpet: Plush, Level Loop, Multilevel, Shag, Floor Mat Other	Bare Floor: Tile, Caminate, Wood Carpet: Plush, Level Loop, Multilevel, Shag, Floor Mat Other	Bare Floor: Tile, (aminate, Wood Carpet: Plush, Level Loop, Multilevel, Shag, Floor Mat Other
Location Description (circle)	Besement, Ground Floor, 1 st Floor, 2rd Floor , Main Floor Other	Basement, Ground Floar, 1 st Floar, ^{2nd} Floar, 3 st Floor, Main Floor Other	Basement, Ground Floor, 1st Floor, 2€ Floor, 3st Floor, Main Floor Other
Matrix Type (circle)	Proof Dust Tracked in Dirt Other	Claor Dust Tracked in Dirt Other	vition Dust Tracked in Dirt Other
Category (circle)	D-(duplicate) RB-(rinsate) SB-(sand blank)	CES_D-(duplicate)_RB-(rinsate) SB-(sand blank)	(F) D-(duplicate) RB-(rinsate) S8-(sand blank)
Sample Parent ID (If a duplicate sample)	NA	PM	NA
Approximate Sample Area (circle units)		gs_cm² m² in²@	/04 cm² m² in² fi
HVS3 Vacuum ID No.	A	A	A
Leak Check? (circle)	No Y66	No (Ne)	No Yes
20 sec cleaning @ end? (circle)	No 👸	No " You	No (Peg.
Total Sample Time	<u> 2.6</u> minutes	/ [/] / minutes	
Flow Drop		S inches of water	5 Inches of water
Nozzie Drop	10 inches of water	/C ² inches of water	IO inches of water
Field Comments	SHOTENGLESSAY: MA	STANCE YOU WERE BY STAN	STARTS WE WAS OUT : 30.2
Bottle Lot Number: (circle) 4219765 1213332	Eno: 48.1/5	END 47.56	END AZIL
Other	Decov@ 1235	Deco~@ 1325	Decon@ 1400

For Data Entry

Entered by: _

Completed by: 4

For Field Team Completion

(Initials)

		green .
ent.		9/73
one	et No.:	4

Other		Field Logbook	1 / //
Sampling Team CDM	Smith Other Name	(6): Ben Simpson	
Data Item	1	2	3
Sample ID	JSHigh HVFloor Rinsateon	JSHigh IN AmaHOOI	JSHIZHHVF1metfRussleco
Location (e.g., room number, etc.)	N/N	"Maix Entrance"	N/A
Sample Group (circle)	Bare Floor: Tile, Laminate, Wood Carpet: Plush, Level Loop, Multilevel, Shag, Floor Mat Other 1:WJ&IC	Bare Floor Tile, Laminate, Wood Carpet: Plush, Level Loop, Multilevel, Shar (Floor Mal.) Other	Bare Ficor: Tile, Laminate, Wood <u>Carpet</u> : Plush, Level Loop, Multilevel, Shag, Floor Mat Other <u>ドルS んぱ</u>
Location Description (circle)	Basement, Ground Floor, 1st Floor, 2 rd Floor, 3 rd Floor, Main Floor Other	Basement, Ground Floor, 1st Floor, 2nd Floor, 3nd Floor, Main Floor Other Grown 1/1 st 5/17	Basement, Ground Floor, 1* Floor, 2* Floor, 3* Floor, Main Floor Other
Matrix Type (circle)	Floor Dust Tracked in Dirt Other R. S. K	Floor Oust Cracked in Dig	Floor Dust Tracked in Dirt Other Ring Life
Category (dircle)	FS D-(duplicate) RB-(rincate) SB-(sand blank)	FS D-(duplicate) RB-(rinsate) SB-(sand blank)	FS D-(duplicate) (RB-(rinset d) SB-(sand blank)
Sample Parent ID (if a duplicate sample)	N/A	N/A	N/A
Approximate Sample Area (circle units)	M/A cm² m² in² tt²	cm² m² in² (t²)	///\frac{1}{2} cm2 m2 in2 ft2
HVS3 Vacuum ID No.	6	15	В
Leak Check? (cirde)	No (Yes)	No (Yes)	No (Yes)
20 sec cleaning @ end? (circle)	No (Yes)	No (Yes)	No (Yes)
Total Sample Time	<2 minutes	3 minutes	CI_minutes
Flow Drop	5 -Ar-ρν inches of water	5 inches of water	
Nozzie Drop	2 14 inches of water	10 inches of water	anches of water
Field Comments	39.178 = Bothe weight	39.21/2 : Buthe	39 124 - BATTE
Bottle Lot Number:	Weight	39.21/2= Bothe Weight 50.82/2= Final	neght
(cirdle) (1219755/	46.466 = MA SIGN		39.12 g = 81918 neight 48.52 g = with Sitica 48.38 g = Finch weak
1215332	110 11 - 62-1	went	Silico
Other	48.22g = Final Decon @ 1400	Decon @ 1415	Decom @ 1455
v 032118		Lab: CLP Container:	HVS3 Catch Bottle = 250 mL LDPE
For Field Team Completion (Initials)	Completed by: 151	For Data Entry Entered by QC by:	

Sheet No.: _____

Other	coln Moodry(High) Memoria	Field Logbook Page No: ノク	No: <u>//</u>
ampling Team: CDM	Smith Other Name	(s): Ben Simpson	/
Data Item	1	2	3
Sample ID	JSHighHVFloor005	JSHISHAV Floor 007	
Location (e.g., room number, elc.)	100m 201	Library /204	
Sample Group (circle)	Bare Floor: Tile Laminate, Wood Carpet Flush, Level Loop, Muttievel, Shag, Floor Mat Other (1143 + 5 mail mat	Bare Fjoor: Tile, Laminate, Wood Carpet)Plush, Level Loop, Mufflevel, Shag, Floor Mat Other	Bare Floor: Tile, Laminate, Wood Carpet: Plush, Level/Loop, Multilevel, Shag, Floor Mat Other
Location Description (circle)	Besament, Ground Floor, 1st Floor) 2st Floor, 3rd Floor, Main Floor Other	Basement, Ground Floor, 1st Floor, Post Floor, 3rd Floor, Main Floor Other	Basement, Ground Floor, 1 st Floor, 2 nd Floor, Main Floor Other
Matrix Type (circle)	Floor Dust Tracked in Dirt Other	(Floor Dust > Tracked in Dirt Other	Floor Dust Tracked in Dist Other
Category (circle)	(FS) D-(duplicate) RB-(dinsate) SB-(sand blank)	S D-(duplicate) RB-(rinsate) SB-(sand blank)	FS D-(dupicate) RB-(rinsate) SB-(sand blank)
Sample Parent ID (if a duplicate sample)	N/A	N/A	
Approximate Sample Area (circle units)	<u>65</u> cm² m² in(t²)	45 cm² m² in²(ti)	cm² m² in² ft²
HVS3 Vacuum ID No.	ß ,	В	
Leak Check? (circle)	No (Yes)	No (re)	No Yes
20 sec cleaning @ end? (circle)	No (Yes)	No (Yes)	No Yas
Total Sample Time	5 minutes	4 64 minutes	minutes
Flow Drop	5 inches of water	5 inches of water	inches of water
Nozzle Drop	10 inches of water	10 inches of water	inches of water
Field Comments Bottle Lot Number:	38.75 = Bittle weight 58.40 & Bottle weight	38.88 = Bottle weight	
(circle) (1219765) 1213332	58.40 y Bottle weight	38.88 = Bottle weight 63.199 = Final weight Decom@ 1535	/ B& 3/25/18
Other	pecin @ 1510	Decom@ 1535	1

ALL AND		Lab: CLP	Container HVS3 Cato	b Bottle = 250 mL LDPE
v 032118		10000 57427		
		7		
IN FIRST CONTRACTOR CON	npieled by: <u>W</u>	For Data Entry	Entered by:	
11-01 tagid 1 sauti Adubidansi - Awa		COL CORR CINIA	manual 4.3	
(milas) QC	by. <u>Δ</u> ΙΔ		QC by:	
	** 7			

Sheet No.: //___

ANACONDA FIELD SAMPLE DATA SHEET (FSDS) FOR HVS3 FLOOR DUST Sampling Date. <u>ヴ</u>/ タラノク School: Headstart | Lincoln | Moodry (High/ Memorial Field Loabook No: 0/ Other Page No: __/O // Name(s): Cowor Keusy Sampling Team: CDM Smith Other 3 4 2 Data Item T Cheenhunooren 6 Sample ID S S HEGHHVALLER Location STORES HAVE 151 Front Room 2017 (a.g., room number, etc.) Bare Floor: Tife, Laminate, Wood Carpet: Plush, Level Loop, Bare Floor, Tile, (aminale, Wood Bare Floor, Tile, (amiriate, Wood Sample Group Carpet: Plush, Level Loop. Carpet Plush Level-Loop, Multilevel, Shag, Floor Mat Multilevel, Shaq, Floor Mat Multilevel, Shag, Floor Mat. (circle) Other Basement, Ground Floor, Basement, Ground Floor, Basement, Ground Floor, 1st Floor, 2th Floor, 3rd Floor, #^{er}Floor, 2nd Floor, 3nd Floor, NCFloor, 2ºº Floor, 3ºº Floor, Location Description Main Floor Main Floor Main Floor (circie) Other Other Other J-loor Dust Floor Dust filoar Dual Matrix Type Tracked in Dirt Tracked in Dirt. Trackéd in Dirt (circle) Other Omer Other FS D/(duplicate) RB-(rinsate) FS D-(duplicate) RB-(rinsate) FS)D-(duplicate) RB-(rinsate) Category (circle) \$8-(fand blank) SB-(sand blank) SB-(sand blank) Sample Parent ID (if a duplicate sample) 190 cm² m² m²/ft²) am² m² in² fl² cm² m² in(fil) Approximate Sample Area (circle units) HVS3 Vacuum ID No. No Yes No ď0\$ (Yas) Leak Check? (circle) No 20 sec cleaning @ end? Ves No Yes (Yes) No No (circle) 72.7 minutes minutes minutes **Total Sample Time** inches of water inches of water inches of water Flow Drop inches of water 17 Inches of water inches of water Nozzle Drop STRATE NOTHING 36.890 JOHNSON, WILLIAM STATE **Field Comments** 640:51.129 640 45.914 Rottle Lot Number: (circle) 1219755 1213392 Other Decoup 1415 Derewa 1530

v 032118		Late: CLP	Container: HVS3 Catch Boltle = 250 mL LDPE
For Field Team Completion (Initials)	Completed by: 🖊	For Deta Entry	Entered by: QC by:

Sheet No.: / ANACONDA FIELD SAMPLE DATA SHEET (FSDS) FOR PERSONAL AIR Sampling Date: 524/15 School: Headstart | Lincoln | Moodry | High | Memorial Field Logbook No: 🌼 🗀 Other Page No: ု 🗇 Data Item uncolnocisticablore Sample ID Surface, Celling Tile\ Air Vent, Surface, Celling Tile, Air Vent, Surface, Celling Tile, Air Vent, Boiler Room, Light Fixture, Aftic, Boiler Room, Light fjildure, Attic, Sampling Activities Boller Room, Light Fixture, Attic, HVS3 Floor (circle all that apply) HVS3 Floor HVS3 Floor Other__/// Other Other Basement, Ground Fibor, Basement, Ground Floor, Basement, Ground Floor, 1st Floor, 2nd **Floor**, 3rd Floor, 1st Floor, 2pd Floor, 3rd Floor, 1st Floor, 2nd Floor, 3rd Floor, Location Description 1scr.⊱ Main Floor ∭/ <u>†</u> Main Floor (circle all that apply) Main Floor Other Other Indoor N Duidoor Andoor Outdoor Both NA NA Indoor Outdoor Both Sample Venue Sample Type FS LB Other LB Other FS FB LB Other Personnel Information: Took Field Blank DUST San Oli Name NA PA-EXC PA-TWA NA PA-EXC PA-TWA Sample Air Type Flow Meter Type NΑ **DryCal** NΑ DryCal NA DryCal Rotameter Rotameter Rotameter Cassette (For Blanks "2" through "Pump ID" to "Sample Air Stop Flow" ot No Flow Meter ID then circle NA for "Pump Foult" & enter 0 for Total Time & Quantity) Pump ID Sample Air Start Date 20776 Sample Air Start Time Sample Air Start Flow (Limin) Sample Air Stop Date Sample Air Stop Time Sample Air Stop Flow (Umin) Yes ΝA NA No Na Y66 No NA Yes Pump Fault Sample Total Time (min) Sample Quantity (L)

For Field Team Completed by, VIFO QC by: For Data Entry: Entered by: QC by:

Lab: Katandin

Field Blane

Field Comments

(circle)

Other_

v 032118

Cassette Lot Number:

50609

Air Filter Diameter = 37mm; Pore Size = 0.6µm

Sheet No.: ______ ANACONDA FIELD SAMPLE DATA SHEET (FSDS) FOR PERSONAL AIR

School: <u>Headstart Lin</u>	<u>coin I Moo</u>	<u>dry I Hig</u> l	n (Memor	ial j			*	24//9	
Other		•	· · · · · · · · · · · · · · · · · · ·		Fiel	d Logboo	لا No: _ك	<u> </u>	
					Paç	je No:	3		
Data Item		1			2			3	
Sample ID	Lince	M20		Men	1.Gyn	120			
Sampling Activities (circle all that apply)	Surface, Co Boiler Roor HVS3 Floo Other	n, Light Fix r	dure, Attic,	Boiler Roo HVS3 Floo	eiling Tile, / m, Light Fix)/ /	ture, Attic,		Celling Tile, bom, Light Fi por	
Location Description (circle all that apply)	Basement 1st Floor 2 Main Floor Other	Greund Fl	or, (Ground Flo 2nd Floor, 3			nt, Ground Fl , 2nd Floor, 3 or	
Sample Venue	(Indoer	Dutdoor	Both NA	(fidoor)	Outdoor	Both NA	Indoor	Outdoor	Both N/
Sample Type	₫\$ ² FB	LB Oth	9f	(fs) FB	LB Othe	я	FS FE	3 LB Øth	er
Personnel Information: ID <u>20</u> Name <u>8</u> 0	n Si	25200	Т	ask_ <i>O/:</i>	/ 50	nOlan			
Sample Air Type	NA PA-E			NA PA-E	KC PA-TW	4.	NA PA-	EXC PA-TW	IA.
Flow Meter Type	}	otameter	, DryCal	NA R	otameter	CDryCal	NA	Rotameter	DryCa
Cassette .ot No ভেড্ড	Flow Mete	in ///	,					iample Air Stop O for Total Tiri	
Pump ID	,			>	0.00.00.00.00	3,00 0000,00	1	.,	
Sample Air Start Date	1000		372	3/2	2/2/12				
Sample Air Start Time	2.42			/359					
Sample Air Start Flow (L/min)	2.05			2,43					
Sample Air Stop Date	3/24	165							
Sample Air Stop Time	1316			1557					
Sample Air Stop Flow (L/min)	2.70			2.16					
Pump Fault	/No)	NA	Yes	/No)	NA	Yes	No	NA	Yes
Sample Total Time (min)		7.	L7H	120					
Sample Quantity (L)		77		2.5					
Field Comments									
Cassette Lot Number:									

For Field Team Completion. Completed by & QC by:_____ Entered by_ For Data Entry: QC by:_

		HEET (FSDS) FOR PE	
N. C.	coln Moodry High Nemo		te: <u>3/24//8</u>
Other		Field Logboo	
		Page No: <u>(</u>)
Geta llem	1	2	3
Sample ID	Lincoln 21	Метбут 21	
Sampling Activities (circle all that apply)	Surface, Ceiling Tile, Air Vent, Boiler Room, Light Fixture, Attic, HVS3 Floor Other	Surface, Colling Tile, Air Vent, Boiler Room, Light Fixture, Attic, HVS3-Floor Other	Surface, Ceiling Tile, Air Vent, Boiler Room, Light Fixture, Allic, HVS3 Floor Other
Location Description (circle all that apply)	Basement, Ground Floor, Tst Floor And Floor, Brd Floor, Main Floor Other	Basement Sround Floor, 1st Floor, 2nd Floor, 3rd Floor, Main Floor Other	Basement, Ground Floor 1st Floor, 2nd Floor, 3rd Floor, Main Floor Other
Sample Venue	Indoor Outdoor Both NA	Indear Outdoor Both NA	Indoor Outdoor Both NA
Sample Type	F8) FB LB Other	FB FB LB Other	FS FB LB Other
Personnel Information; // &	ion Wilson :	ask Dust Samolins	
Sample Air Type	NA PA-EXG (PA-TWA)	,	NA PA-EXC PÁ-TWA,
Flow Meter Typo	NA Rotameter (DryCa)	·	<u> </u>
Cassetto .ot No	Flow Meter ID // 00/		imp 10" to "Sample Ale Stap Flow" sult" & enter 0 for Total Time & Quantity)
Pump ID	4275GO		
Sample Air Start Date	3/2/9// 8	***	/
Sample Air Start Time	6:4a	/3.59	
Sample Air Start Flow (Limin)	2.84	2.63	//
Sample Air Stop Date	3/24/18		1
Sample Air Stop Time	1783.	1559	
Sample Air Stop Flow (Limin)	146	7.99	/
Pump Fault	No NA Yes	/No NA Yes	No/ NA Yes
Sample Total Time (min)	2/14	72.6	
Sample Quantity (L)	551	2.47	

For Field Team Completion. Completed by QC t

Field Comments

(circle)

Other

v 032118

Cassette Lot Number:

QC by

For Date Entry:

Lab: Katahdin

Entered by

OC by_

Air Filter Dlameter = 37mm; Pore Size = 0.8µm

ANACONDA FIELD SAMPLE DATA SHEET (FSDS) FOR PERSONAL AIR

	/			· ·	,		Lin	
School: H	eadstart I t.	<u>incoln ()Moodr</u>	/ High Merr	norial _/	Sampling	Date: 3/2	10110	
	· · · · · · · · · · · · · · · · · · ·		W					
(Jr	her	***************************************			Field Log	book Na:		
					mana Ma	13		
					Page No:			

Data Item	T. T.			2			3	
Sample ID	Lincoln 23		m	mG,	m23			
Sampling Activities (circle all that apply)	Surface, Ceiling Tile, Alt 1 Boller Room, Light Fixture HVS3 Floor Other 30 Mp/2004		Surface, Co Boiler Roor HVS3 Floor Other	n, Light Fü	dure, Attic,			Air Vent, xture/Attic,
Location Description (circle all that apply)	Basement, Ground Floor, 1st Floor 2nd Floor) 3rd f Main Floor Other		Basement 1st Floor, 2 Main Floor Other	Ground Fi	oor,		t, Ground F 2nd Floor, ir	
Sample Venue	/fidogr Outdoor Bot	h NA	findgor (Duldoor	Both NA	Indoor	Outdoor	Both NA
Sample Type	/FS)FB LB Other_		/FS) FB	LB Oth	or	FS FB	LB OII	191 <u></u> 191
Personnet Information: ID 2> Name ©	nnov	1	15 86k <u>52</u> /2/21					
Sample Air Type	NA PA-EXC (PA-TWA	7	NA PAEX	C MATIN		NA PA-E	XC PA-JY	A T
Flow Meter Type	NA Rotsmeter	ØiyCal	NA R	stameter	CDryCal. ⁾	NA	Rotamuter	DryCal
Cassette .ot No <i>উপজ্ঞ</i> ীচু. ১	k Row Mater ID 1/2℃	21			Z" through "Po IA for "Pump Fo			
Pump ID	827 427		7					
Sample Air Start Date	3/24/18							
Sample Air Start Time	8.42		/357				/	
Sample Air Start Flow (L/min)	2.04		2,04					
Sample Air Stop Date	3/2///6		- 7					l
Sample Air Stop Time	1316 13241		1557					
Sample Air Stop Flow (L/mln)	2.01		2.00					
Pump Fault	/No NA	Yes	702	NA	Yas	No	NA	Yes
Sample Total Time (min)	2.14		120					
Sample Quantity (L)	\$ 57		249					
Field Comments								
Cansette Lot Number: (circle)								
Other								
v 032118			Lab: Kal	andin	Air Filter D	iameter = 3	/mm; Pore S	ize = 0.8µm

														88				ж.	200	
														83	888	4.3		88	881	
													10	9		88.	90			
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9		88	83	8	923		33		27			10	n	0.0	т,					
	ത്ത	300		770									***	***	644	666	a	**	***	***

chool: <u>Headstart Lifri</u> Other	2011 MIOO	<u>-</u>	1 1812(1318)	1681	Fie	eld Logbool ge No: <u> </u>	c No: <u> </u>		
Data Item		T			2			3	
Sample ID	<i>Unc</i>	ghā)Ų	(7)	on G	_{ym} 94			
Sampling Activities (circle all that apply)	Surface, Ce Boiler Roor HVS3 Floor Other	n, Light Fix	ture, Attia,	Surface, C Boiler Roo HVS3, Floo Olings	m, Light F	Air Vent, ixture, Attic,		Ceiling Tile, om, Light Fb ior	
Location Description (circle all that apply)	Basement 1st Flodi, 2 Main Floor Other	Ground Fic nd Floor, 3	or, rd Floor,	Basement 1st Floor, : Main Floor Other	Ground F and Floor,	loor,		I, Ground FI 2nd Floor, 3 II	
Sample Venue	(Indoorly)	Dutdoor	Both NA	(indoor)	Outdoor	Both NA	Indoor	Ouldoor	Both NA
Sample Type	/f\$x fB	LB Oth	BI	15)ts	LB OII	10I	FS FB	LB Olly	er
Personnel Information: ID 34 Name <i>M</i>	<i>(1)</i> s	44	<i>^</i> т	ask		77.27.			
Sample Air Type	NA PA-E			NA PA-E			· v	EXC. PA-TW	Α
Flow Meter Type			OryCal	4	otameter	/ OryCal	, NA	Rotameter	DryCa
Cassette .ot.No <u>〜〜〜</u> たすってんご	/2s// 8 Flow Mote	en 170	3 <i>6</i> 7/			"X" through "Pu NA for "Pump Fi			
Pump ID	lo	* 44		3990	11/4/14/16/16/16	mayor rumps.			e to demonstra
Sample Air Start Date	3/26			390					
Sample Air Start Time	814a			73.59			\		
Sample Air Start Flow (L/min)	2.01			2.07					
Sample Air Stop Date			******	250					
Sample Air Stop Time	1276			1559					
Sample Air Stop Flow (Umin)	2,000			2.05					
Pump Fault	No	NA	Yes	76)	NA	Yos	No	NA	Yes
Sample Total Time (min)	2.74			/20					
Sample Quantity (L)	93			2.4	7				
Field Comments									
Cassette Lot Number: (circle)									
Other									
/ 032118	<u> </u>			Lab: K		Ale Cillian C	L Vancounters of a	7mm; Pare Si	·- N. D

For Field Team Completion, Completed by: 4 QC by 4 For Data Entry QC by Entered by:__

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ANACONDA FÆLD SAMPLE DATA SHEET (FSDS) FOR PERSONAL AIR

	1	*	and the second	9/2/2//4
School: Headstart	I Lincoln / Moodry	High Memorial	Sampling Date:	5/26//8
			Printed I make a she I	
Other			Field Logbook I	4o: <u>/2 /</u>

Sample Venue Sample Venue Andoor Outdoor Both NA Indoor Outdoor Bo	Data Item	1	2	3
Sampling Activities (circle all that apply) Boller Room, Light Fixture, Attic. HYS3 Floor Office Service Cook Office Service	Sample ID	Lincolnas	mem Gym 25	
Location Description (circle all that apply) Sample Venue Indioor Outdoor Both NA Indoor Outdoor Outdoor Outdoor Both NA Indoor Outdoor Outdo		Boller Roam, Light Fixture, Attic, HVS3 Eloor	Boller Room, Light Fixture, Attic, HVS3 Floor	
Sample Type FS FB LB OtherFS FB LB OtherFS FB LB OtherFS FB LB Other Personnel Information: (D 2.5 Name Al an Cy Booling Task dust Sumble Air Start Time Sample Air Start Time Sample Air Start Flow (Limin) Sample Air Stop Flow (Limin) Sample Total Time (min) Sample Quantity (L) Sample Quantity (L) Field Comments Cassette Lot Number: (circle)		JSI Floor, 2nd Floor, 3rd Floor, Main Floor	1st Floor, 2nd Floor, 3rd Floor, Main Floor	1st Floor, 2nd Floor, 3rd Floor, Main Floor
Personnel information: ID 25 Name A/ and by Bodin's Task (MS) SUMA (NA PAEXC PATWA) Sample Air Type NA PAEXC PATWA NA PAEXC PATWA (NA PAEXC PATWA) Flow Meter Type NA Rotameter (NyCal) NA Rotamete	Sample Venue	Andoor Outdoor Both NA	(Indger) Outdoor Both NA	Indoor Outdoor Both NA
Sample Air Type NA PA-EXC PATWA NA PA-EXC PATWA NA PA-EXC PATWA Flow Meter Type NA Rotameter OryCal N	Sample Type	FS FB LB Other	F8 FB LB Other	FS FB LB Other
Flow Meter Type NA Rotameter OryCal NA Rotameter OryCal NA Rotameter DryCal Na Rotamet	Personnel Information: ID 2.5 Name_///	ency Boldinx +	ask dust samolin	
Cassette Lot Number: Cassette	Sample Air Type	NA PA-EXC CATWA	NA PAEXC PATÍNA) (NA PA-EXC PA-TWA
Cot No Flow Meter ID //OO/ then circle MA for "Pump Poult" & enter 0 for fotal Time & Que Pump ID	Flow Meter Type	NA Ratameter ∕OryGal	NA Rotameter CDryCal	NA Rotagaeter DryCal
Pump ID Sample Air Start Date Sample Air Start Time Sample Air Start Flow (Limin) Sample Air Stop Date Sample Air Stop Time Sample Air Stop Flow (Limin) Pump Fault Sample Total Time (min) Sample Quantity (L) Field Comments Cassette Lot Number: (circlis)	Cassette Jot No. 5 24-54	//*//* Flow Meter ID //00/		
Sample Air Start Time Sample Air Start Time Sample Air Start Flow (Limin) Sample Air Stop Date Sample Air Stop Time Sample Air Stop Flow (Limin) Pump Fault Sample Total Time (min) Sample Quantity (L) Field Comments Cassette Lot Number: (circle)			1	
Sample Air Stor Date Sample Air Stop Date Sample Air Stop Time Sample Air Stop Flow (L/min) Sample Air Stop Flow (L/min) Pump Fault Sample Total Time (min) Sample Quantity (L) Field Comments Cassette Lot Number: (circle)	Sample Air Start Date			A / 3.7
Sample Air Stop Date Sample Air Stop Time Sample Air Stop Flow (L/min) Pump Fault Sample Total Time (min) Sample Quantity (t.) Field Comments Cassette Lot Number: (circle)	Sample Air Start Time	9:40	1359	61
Sample Air Stop Time Sample Air Stop Flow (L/min) Pump Fault So NA Yes No NA Yes No NA Yes No NA Yes No NA Yes Sample Total Time (min) Sample Quantity (L) Field Comments Cassette Lot Number: (circle)	Sample Air Start Flow (Limin)	2.67	2.15	
Sample Air Stop Flow (L/min) Pump Fault Sample Total Time (min) Sample Quantity (i.) Field Comments Cassette Lot Number: (circle)	Sample Air Stop Date	3/2//16	>	
Sample Air Stop Flow (L/min) 2 /6 Z .14 Z .14	Sample Air Stop Time	73/4	/5 /5 /9	
Pump Fault (NO NA Yes NO NA Yes NO NA Yes NO NA Yes No NA Yes Sample Total Time (min) 274 /20 Sample Quantity (L) 580 257 Sield Comments Cassette Lot Number: (circle)	Sample Air Stop Flow (L/min)	21/0		
Sample Quantity (i.) 580 Z57 Field Comments Cassette Lot Number: (circle)	Pomp Fault		(No.) NA Yes	No NA Yes
Sample Quantity (L) 580 257 Field Comments Cassette Lot Number: (circle)	Sample Total Time (min)	2.74	/20	
Cassette Lot Number:	Sample Quantity (L)	580		
Cassette Lot Number: (circle).	Field Comments			
	(circle).			•
Other	Other			

For Field Team Completion, Completed by

QC by: \$5%

For Data Entry.

Entered by:

QC by ____

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	e.	8	n	Э.	В	×	з	٧	ĕ	۳	7	S			1		8		٥	v	×		٠,	×	×	×	ú	۰	×	а	ĸ	×	ö	к	×	ø	۰	×	ö	ŵ

Other		Field Logbook No: <u>///</u> Page No:					
Data Item	1	2	3				
mple ID	Membymiters Field	Blanc					
mpling Activities role all that apply)	Surface, Ceiling Tile, Air Vent, Boiler Room, Light Fixture, Attic, HVS3 Floor, Other	Surface, Ceiling Tile, Air Vent, Boiler Room, Light Fixture, Attid. HVS3 Floor Other	Syrtace, Ceiling Tile, Air Vent, Boiler Room, Light Fixture, Altic MVS3 Floor Other				
cation Description role all that apply)	Basement, Ground Floor, 1st Floor) 2nd Floor, 3rd Floor, Main Floor Other	Basement, Ground Floor, 1st Floor, 2nd Floor, Main Floor Other	Basement, Ground Floor, 1st Floor, 2nd Floor, 3nd Floor, Main Floor				
mple Venue	(Indoor) Outdoor Both NA	Indoor Outdoor Both NA	Indoor Outdoor Both N				
mple Typo	FS (FB) LB Other	FS FB LB Other	FS FB LB Other				
rsonnst Information: No. Name	ield Blank 1	sisk	·				
mple Air Type	NA PA-EXC PA-TWA	NA PA-EXC BA-TWA	NA PA-EXC PA-TWA				
ow Meter Type isselte it No	NA Refameter DryCal		NA Rotameter DryC: imp ID" to "Sample Air Stop Flow" ault" & enter 0 for Total Time & Quantit				
ımp ID							
imple Air Start Date	7/24//4		/				
imple Air Start Time	/3.55						
mple Air Start Flow (Limin			N0/				
imple Air Stop Date							
imple Air Stop Time			} /^-				
mple Air Stop Flow (Limin		(9)					
ımp Fault	No\ NA Yes	No NA Yes	No NA Yes				
imple Total Time (min)	17/	1					
imple Quentity (L)		/					
eld Comments assette Lat Number: Ircle) 50609	Field Blank						
ther							
32118	J	Lab: Katahdin Air Fliter i	Diameter = 37mm; Pore Size = 0.8μm				

She	et N	0.1		

Other		Field Logbook Page No: <u>/ 2</u>	
Sampling Team: CDM	Smith Other Name	e(s): Ben simpson	
Data Item	1	2	3
Sample ID	Lincoln HVFlmut003	LincolnHVFloor 008	LincolnHVFloor007
Location (e.g., room number, stc.)	Gym entrance	Gym ball court	Gym Stage /class
Sample Group (circle)	Bere Floor: Tile, Laminate, Wood Carpet: Plush, LevetLoop Multilevel, Shag, Floor Mat Other	Bare Floor: Tile, Laminate (Woor) Carpet: Plush, Level Loop, Multilevel, Shag, Floor Mat Other	Bare Floor: Tile, Laminate, Wood Carpet Plush, Level Loop, Multilevel, Shag, Floor Mat Other
Location Description (circle)	Basement, Ground Floor, 1st Floor, 2 nd Floor, 3 nd Floor, Main Floor Other, AAA, Gym	Basement, Ground Floor, 1 st Floor, 2 st Floor, Main Floor Other A&& Gym	Basement, Ground Floor, 1 st Floor, 2 nd Floor, Main Floor Other AM Gym
Matrix Type (circle)	Floor Dust (Tracked in Dirt Other	(Floor Dust) Tracked in Dirt Other	Floor Dust Tracked in Dirt Other
Category (circle)	(FS)0-(duplicate) R8-(rinsate) S8-(sand blank)	FS D-(duplicate) RB-(rinsate) SB-(sand blank)	(FS) D-(duplicate) RB-(rinsate) SB-(sand blank)
Sample Parent ID (if a duplicate sample)			
Approximate Sample Area (circle units)	cm² m² in² (i²)	306 cm² m² in²(f)	cm² m² in(ft²)
HVS3 Vacuum ID No.	6 /	13	J. Commission
Leak Check? (circle) 29 sec cleaning @ end?	No (Yes)	No (Yes)	No (Yes)
(cirde)	No (Yes)	No (Yes)	No (Yes)
Total Sample Time	4 minutes		<u>B</u> minutes
Flow Drop	5 inches of water	5 inches of water	5 inches of water
Nazzle Drop	10 inches of water	8 inches of water	10 Inches of water
Field Comments	39g=Bottle weight	39.182 = Bothe	39.24: Bothe
Battle Lat Number (circle)	75.225 Faul bottle	39.18g = Bothle weight 49.02g = Final weight	39.24: Bothe Weight 70.27.=Final Weight
(219755 ノ 1213332	wahre	Weight	Weight
Other	Decon @ 0845	Decome 0930	Decon @ 1015
v 032118		Lab: CLP Container: F	IVS3 Catch Bottle = 250 mL LDPE
For Field Team Completion (Initials)	Completed by: 188	For Dafa Entry Enlared by: QC by:	

Sheet No.: 🔊

ANACONDA FIELD SAMPLE DATA SHEET (FSDS) FOR HVS3 FLOOR DUST Sampling Date: 3/30/18School: Headstart (Lincoln | Moodry | High | Memorial Field Loabook No: 0/ Other Page No: ____3 CONNERKEUSY Sampling Team: CDM Smith Other Name(s): 4 A Data Item / ENCOLVINEUXFOOL Lencowllynarcos Sample ID LEWIS WHY FLOOROGI Zenkany Location 15t from bouggeor 1ST FLOOR ROWA ! IST FLOOR HALL (e.g., room number, etc.) <u>Bare Floor</u>: Tile, I**Çenhate)** Wood Bare Floor: Tile(Camilla)e, Wood Bare Floor, Tile, CominaiA, Wood Sample Group CometyPaph, Level toop, Carpet: Plush, Level Coop. Carpet Plush, Level Loop, Multilevel, Shag, Floor Mat Multilevel, Shap, Floor Mat. Mullilevel, Shaq, Floor Mat. (circle) Other Other Other Basement, Ground Floor, Basement, Ground Floor, Basement, Ground Floor, 4. Fludr. 2" Floor, 3" Floor, (Til Fibor, 2" Floor, 3" Floor, (1^{er} **718g)**, 2^{ee} Floor, 3^{ee} Floor, Location Description Main Floor Main Floor Main Floor (circle) Other Other Other Floor Olukt Filter Cale Floor Dust Matrix Type Tracked in Dirt Tracked in Dirt Tracked in Dirt (cirde) Other_ Other_ Other FS_ID (duplicate)_R8 (finsate) (FS)D (duplicate) RB-(rinsate) F5) D-(duplicate) RB-(nnsate) Category (circle) SB-(sand blank) SB-(sand blank) SB-(sand blank) Sample Parent ID (if a duplicate sample) 180 Approximate Sample: cm² m² ir² 💋 can2 m2 in2 /f2) cm² m² in²/ff52 Area (circle units) A HV83 Vacuum ID No. $N_{\rm es}$ 77 Leak Check? (circle) No No No 20 sec cleaning @ end? (a)fes/ No No No (circle) 15...5 16 10 minutes minutes **Total Sample Time** minutes inches of Water inches of water inches of water Flow Drop 70 K) 10 inches of water inches of water inches of water Nozzie Drop 57AE74~6 WEZENTINI STAINE ME MODEL 39,060 STARTENE MERGETS Field Comments 6-0:67.47. E-P 56320 ENB: 4712 Battle Lat Number: (circle)~= 1219765 1213332 Other DECOUP, 0935 Decorp 0900 DECOMPO 1925 Lab: CLP

For Data Entry

v 032118

(initials)

For Field Team Completion

Completed by: ${\cal L}$

QC by 📶

	 	 	7
Entered by: QC by			

School: <u>Headstart I (</u> I Other	ncoln Moodry High Memor	<u>ial</u> Sampling Date Field Logbook	No: <u>01</u>
Sampling Team: 《DM	Smilth Other Nam	e(s): Page No:	(3
Data Item	1	2	3
Sample ID	LincolnHVPImaH00)	Lix Coln AVFloor 005	Lincoln HV Floor 606
Location (e.g., room number, etc.)	West entrance from hallway to player	Stall Longe	Hallmay
Sample Group (circle)	Sare Floor: Tile, Laminate, Wood Carpet: Plush, Level Loop, Multilevel, Shag (Floor Mat) Other	Bare Floor: Tile, Laminate, Wood Carpet Plush, Level Loop, Multilevel, Shag, Floor Mat Other	Bare Floor Tile Laminate, Wood Carpet: Plush, Level Loop, Multilevei, Shag, Floor Mat Other
Location Description (circle)	Basement, Ground Floor, 1 st Floor) 2 nd Floor, 3 nd Floor, Main Floor Other	Besement, Ground Floor, 1st Floor, (2 nd Floor,)3 nd Floor, Main Floor Other	Basement, Ground Floor, 1 th Floor (2 nd Floor) 3 nd Floor, Main Floor Other
Matrix Type (circle)	Floor Dust (Fracked in Dirt) Other	(Floor Dust) Tracked in Dirt Other	Floor Dust Tracked in Dirt Other
Category (circle)	FS D-(duplicate) RB-(rinsate) SB-(sand blank)	(S)D-(duplicate) RB-(rinsate) SB-(sand blank)	F D-(duplicate) RB-(rinsate) SB-(sand blank)
Sample Parent ID (if a duplicate sample)	m/h	N/A	N/A
Approximate Sample Area (circle units)	12 cm² m² in² (t²)	80 cm² m² in(ft?)	<u> </u>
HVS3 Vacuum ID No.	8 ~	B	ß
Leak Check? (circle)	No (Yes)	No (Yes)	No (Yes/
20 sec cleaning @ end? (circle)	No (es)	No (Yee)	No 69
Total Sample Time	4 minutes	4 minutes	15 minutes
Flow Drop	5 inches of water		5 inches of water
Nazzie Drop	10 inches of water	10 inches of water	5 inches of water
Field Comments	38 90 = Outho	29 AAZ = BARANE	39.03g = Bottle
Bottle Lot Number:	38.90; = Bothe Weight	Vent	weight
(circle) 1219756 12133332	68.89g=Final	39,00g = Bothe Weight 51.42g = Final Weight	39.03g = Bottle weight 47.74g = Final Weight
Other	Decomp 1100	Decon @ 1125	Decon @ 1200
032118		Lab: CLP Container: I	IVS3 Catch Bottle = 250 mt, LDPE
or Field Team Completion Initials)	Completed by: <u>B</u>	For Data Entry Entered by: QC by:	

Sheet No.: 4

ANACONDA FIELD SAMPLE DATA SHEET (FSDS) FOR HVS3 FLOOR DUST

Other		Field Logbook			
/=		Page No:	<u> </u>		
Sampling Team: Q DM	Smith Other Name	e(s): <u>Comman Kaufy</u>			
Data Item '	1	2	3		
Sample ID	LENCONN HIV FLOWER RENSONET	es coentres D	LINCOLNHYKUMATOOL		
Location (e.g., room number, etc.)	ESBERT OF 033618	L'E BRANY	1ST FLOOR MASH DOOR		
Sample Group (circle)	Bare Floor: Tile, Laminate, Wood Carpet: Plush, Level Loop Multilevel: Shop, Floor Met Other	Bare Floor, Tile, Laminate, Wood Carpet Flosti, Level Loop, Multilevol, Shag, Floor Mat Other	Bare Floor: Tile, Laminate, Woo Carpet: Plush, Level Loop, Multilevel, Shag, Floor Mat Other		
Location Description (dircle)	Basement, Ground Floor, (I st Floor, 2 nd Floor, Main Floor Other	Basement, Ground Floor, (^{ar} Floor, 3 ^{rs} Floor, Main Floor Other	Basement, Ground Floor, Togr. 2 nd Floor, 3 nd Floor, Main Floor Other		
Matrix Typo (circle)	Floar Dust Tracked in Dirt Other) RINSATE	Floor Dupl Tracked in Dirt Other	Floor Dust Cracked in Dirt Other		
Category (circle)	FS D-(duplicate) (RB-(rinsate) SB-(sand blank)	SB-(sand blank)	D-(duplicate) R6-(rinsate) 86-(sand blank)		
Sample Parent ID (if a duplicate sample)		LEMOLAND FROM COS			
Approximate Sample Area (circle units)	NAcm² in³(j²)	80 cm² m² ln² (0	1 3 cm² in²(f		
HVS3 Vacuum ID No.	A	To A	A		
Leak Check? (circle)	No Yes	No (Tex	No (16)		
20 sec cleaning @ end? (circle)	No Yes	No (6)	No (Yes		
Total Sample Time	>1 minutes	9_minutes			
Flow Drop	Inches of water	5 inches of water	5 inches of water		
Nozzie Drop	inches of water	/ <u>O</u> inches of water	/// inches of wate		
Field Comments Bottle Lot Number: (circle) 1219759 1213332	SAMSSAL WEIGHT (\$7,000) WHOCHA - 346/9 42.139 - 19	Smarrosteson:39/Kg Exo: 7094	Smerene he rept; 39,14. ENO:51.85à		
Other	Decor@ 1110	Decon@1/25	DERON@ 1205		
v 032118		Lab: CLP Container: F	fV33 Catch Bottle = 250 ml. LDPE		
For Field Team Completion Initials)	Completed by:	For Data Entry Enlered by:			

Sheet No.: 5

ANACONDA FIELD SAMPLE DATA SHEET (FSDS) FOR HVS3 FLOOR DUST

School: <u>Headstart I Li</u> Other	ncoln Moodry High Memor	<u>ial</u> Sampling Date Field Logbook	: <u>3 24//</u> 6 No: 01	
		Page No:	^\\^\^\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	
Sampling Team: COM	Smith Other Nam	e(s) <u>Comme "Eller"</u>		
Data Item	1	2	3	
Sample ID	TENCOL UNITED REMARKSON	LINCOLN HUFLMAT DOY		
Location (e.g., room number, etc.)	NA	151 GLAR BY EMIL DOOR	Cli,	
Sample Group (sircle)	Bare Floor: Tile, Laminate, Wood Carpet: Plush, Level Loop, Multilavel, Shag, Floor Mat Øthe Paramer	Bare Floor: Tile, Laminate, Wood Carpet: Plush, Level Logo, Multilevel, Shan⊄Lour Mat Other	Bare Floor Tile, Caminate, Woo Carpet: Plush, Level Loop, Multilevel, Shag, Floor Mat Other	
Location Description (circle)	Basement, Ground Floor, 1* Floor, 2* Floor, 3* Floor, Main Floor Otto: ICF~/#rs	Ground Floor, Basement, Ground Floor, Floor, 3 rd Floor, Main Floor		
Matrix Type (circle)	Floor Dust Tracked in Dirt Other	Floor <u>Dust</u> Tracked in Di rt Other	Floor Dust Tracked in Dirt Other	
Gategory (circle)	FS D-(duplicate) (48-(dpssie) (S8-(sand blank)	TS/ D-(duplicate) RB-(rinsate) SB-(sond blank)	FS D-(duplicate) RB-(rinsate) SB-(sand blank)	
Sample Parent ID (if a duplicate sample)				
Approximate Sample Area (circle units)			cm² m² ln² fl²	
HVS3 Vacuum ID No.	A	А		
Leak Check? (circle)	No (764	No (Yes)	No Yes	
20 sec cleaning @ end? (circle)	No 🐼	No Yes	No Yes	
Total Sample Time	≥ ⊈ minutes	✓ minutes	minutes	
Flow Drop	10 inches of water	S_inches of water	inches of water	
Nozzie Drop	2inches of water	/O_inches of water	inches of water	
Field Comments	519952-9 HESBUT 32134	SALASTED - 28.00		
Bottle Lot Number: (circle) 1219759 1213332	5445-4 - 42545, 39.13.3 W/o CAP: 32.52.3 YI:13 W/SILSER: 49.50 8 CAP	STARTED 138.019 ENO SP.189	4	
Other	Decore 1218	DEcon@12-35		
(032118		Lab: CLP Container: I	fVS3 Catch Bottle = 250 mL LDPE	
Far Field Team Completion	Completed by:	For Osta Entry Entered by: QC by:		

Sheet No.: <u>//</u>___

Other	ncoln Moodry High Memori	Field Logbook	No: <u>0/</u>
ampling Team: CDM	Smith Other Name	e(s): Ben Simpson	<u>KS</u>
Data Item	1	2	3 /
Sample ID	Lincoln HVFloor 004	•	-
Location (e.g., room number, etc.)	Room 23		
Sample Group (circle)	Bare Floor: Tile, Laminate, Wood Carpe Plush, Level Loop, Multilevel, Shag, Floor Mat Other	<u>Bare Floor</u> : Tile, Laminate, Wood <u>Carpet</u> : Plush, Level Loop, Multilevel, Shag, Floor Mat Other	Bare Floor, Tile, Lominate, Wood Carpet: Plush, Level Loop, Multilevel, Shad, Floor Mat Other
Location Description (circle)	Basement, Ground Floor, 1 st Floor, ^{Ord} Floor, Main Floor Other	Basement, Ground Floor, 1 st Floor, 2 nd Floor, 3 nd Floor, Main Floor Other	Basement/ Ground Floor, 1* Floor/ 2 rd Floor, 3 rd Floor, Main Floor Other
Matrix Type (circle)	Floor Dust Tracked in Dirt Other	Floor Dust Tracked in Dirt Other	Floor Dust Tracked in Dirt Other
Category (circle)	(FS) D-(duplicate) RB-(rinsate) SB-(sand blank)	FS D-(duplicate) RB-(rinsate) / SB-(sand blank)	FS D-(duplicate) RB-(rinsate) SB-(sand blank)
Sample Parent ID (if a duplicate sample)	N/A		
Approximate Sample Area (circle units)	165 cm² m² in (tr)	cm² yh² in² tt²	cm² m² in² ft²
HVS3 Vacuum ID No.	6		
Leak Check? (circle)	No (Yes	No Yes	No Yes
20 sec cleaning @ and? (circle)	No (Yes)	No y es	No Yes
Total Sample Time	6 minutes	/ minutes	minutes
Flow Drop	5 Inches of water	/ inches of water	inches of wate
Nozzle Drop	(A) Inches of water	Inches of water	inches of wate
Field Comments Bottle Lot Number: (ctrcle)	39,10g = Bottle weight 62.10g = Final weight Decon @ 12.50	188 150	18
1213332 Other	60.10g stike	3/26/4	
	perone 1250	1	
v 032118		Lab: CLP Container:	HVS3 Catch Boltle = 250 mt. LDPE
For Field Team Completion (Initials)	Completed by:	For Data Entry Entered by QC by:	· <u> </u>

Sheet No:

ANACONDA FIELD SAMPLE DATA SHEET (FSDS) FOR PERSONAL AIR

						 ,, . w			
School	Headstart I	Lincoln,	Moodry I	High I	Memorial	Sampling Date	3 3/26	// 9	
	Other	·			×	Field Logbook			
						Page No: 🔝			
						. ~3~			~ ~~

Sample ID	Lincoln 20	MenGym 20	
Sampling Activities (circle all that apply)	Surface, Ceiling Tile, Air Vent, Boiler Room, Light Fixture, Attic, HVS3 Floor Other	Surface, Ceiling Tile, Air Vent, Boiler Room, Light Fixture, Attic, HVS3 Floor Other 141/ 5 4 Polane	Surface, Ceiling Tile, Air Vent, Boller Room, Light Fixture/ Attic, HVS3 Floor Other
Location Description (circle all that apply)	Basement, Ground Floor, 1st Floor, 2nd Floor, 3rd Floor, Main Floor Other	Basement Ground Floor, 1st Floor, 2nd Floor, 3nd Floor, Main Floor Other	Basement, Ground Floor, 1st Floor, 2nd Floor, 3rd Floor, Main Floor Other
Sample Venue	(indoor Outdoor Both NA	Indoor Outdoor Both NA	Indoor Outdoor Both NA
Sample Type	FS FB LB Other	FS FB LB Other	FS FB LB Other
Personnel Information: ID <u>20</u> Name <u>Be</u> i	<u>n Simson</u> т	ask Dust Samplin	5 / (
Sample Air Type	NA PA-EXC PA-DVA	NA PA-EXC\PA-TWA	NA PA-EXC PA-TWA
Flow Meter Type	NA Rotameter ØryCal	NA Rotameter <u>DryCal</u>	NA Rotameter DryCa
Cassette .ot No <u>েচ০ ক</u>	Flow Meter ID //20/		mp ID" to "Sample Air Stag Blow" sult" & enter 0 for Total Time & Quantity
Pump ID	S (5 8 0 6 5 5 -		¥
Sample Air Start Date	44440	3/26//8	
Sample Air Start Time	8142	/359	
Sample Air Start Flow (L/min)	2.05	2.13	5
Sample Air Stop Date	3/24/76		*
Sample Air Stop Time	13:16	1557	
Sample Air Stop Flow (L/min)	2.14	2.14	
Pump Fault	/Ño NA Yes	/Ño) NA Yes	No NA Yes
Sample Total Time (min)	34.77 274	/20	
Sample Quantity (L)	5 77	2.57	
Field Comments Cassette Lot Number: (circle) 50609 Other			
/ M32118		l ah: Katabriin Air Filler N	ismeter = 37mm; Pore Size = 0.8

v 032118

Lab: Katahdin Air Filter Diameter = 37mm; Pore Size = 0.8µm

	/				
For Field Team Completion	on Completed by 🖋 🧸	# 1 OChv - I	For Data Entry I	Entered hy:	OC her I
	· · · · · · · · · · · · · · · · · · ·				~~ ~/·
		······································	·····	·····	

School: <u>Headstart Lin</u>				Fie	mpling Da ild Logboo ge No: <u>/</u>	k No: <u> </u>	!	
Data Item	1			2			3	
Sample ID	Lincoln	21	Men	1640	ı Əl	-		
Sampling Activities (circle all that apply)	Surface, Ceiling Tile Boiler Room, Light F HVS3 Floor Other Samples	jxture, Attic.	Surface, Co Boiler Roor HYS3 Floo Other 22	n, Light Fi	xture, Attic,		Ceiling Tile, a om, Light Fio or	
Location Description (circle all that apply)	Basement, Ground I 1st Floor And Floor Main Floor Other		Basement, Ground Floor, 1st Floor, 2nd Floor, 3rd Floor, Main Floor			Basement, Ground Floor, 1st Floor, 2nd Floor, 3rd Floor, Main Floor Other		
Sample Venue	Indoor Outdoor	Andoor 2	Dutdoor	Both NA	Indoor	Outdoor	Both N/	
Sample Type	FS) FB LB OI	FS FB LB Other			FS FB LB Other			
Personnel Information: 1/2 ID <u>574-64</u> Name <u>5/7</u>	ion Wilson	т	ask <i>[]_</i>	5	14/1/11.			2 1
Sample Air Type	NA PA-EXC (PÁ-Í	NA PA-EX	C PATÍ		NA PA-E	XC PA-TW		
Flow Meter Type	NA Rotameter	On Cal		otameter	OnyCal-		Rotameter	N DryCa
Cassette .ot No	Flow Meter ID <u>//</u>	00/		*	"Z" through "Pi VA for "Pump F			
Pump ID	82756							
Sample Air Start Date	3/24//8							
Sample Air Start Time	6:42		/3.59				/	
Sample Air Start Flow (L/min)	2.54		2.03					
Sample Air Stop Date	2/2	4/18						
Sample Air Stop Time			1559			/		
Sample Air Stop Flow (Umin)	7.46		7.99			7		
Pump Fault	/No) NA	Yes	76	NA	Yes	No/	NA .	Yes
Sample Total Time (min)	274		120					
Sample Quantity (L)	551		241					
Field Comments								
Cassette Lot Number: (circle)								
Other			1					

QC by ______ For Field Team Completion. Completed by For Data Entry Entered by QC by:

Sheet No. <u>と</u>り

ANACONDA FIELD SAMPLE DATA SHEET (FSDS) FOR PERSONAL AIR School: Headstart | Lincoln (Moodry | High | Memorial Other_

Sampling Date: 🗵	36113
Field Logbook No:	<u> </u>
Page No. <u>13</u>	

Data Item	1	2	3
Sample ID	Lincoln 23	memGym23	
Sampling Activities (circle all that apply)	Surface, Ceiling Tile, Air Vent, Boiler Room, Light Fixture, Attic, HVS3 Floor Other	Surface, Ceiling Tile, Air Vent, Boiler Room, Light Fixture, Attic, HVS3 Floor Other)	Surface, Ceiling Tile, Air Vent, Boiler Room, Light Fixture, Attic, HVS3 Floor Other
Location Description (circle all that apply)	Basement, Ground Floor, 1st Floor, 2nd Floor) 3rd Floor, Main Floor Other	Basement, Ground Floor, 1st Floor, 2nd Floor, 3rd Floor, Main Floor Other	Basement, Ground Floor, 1st Floor, 2nd Floor, 3rd Floor, Main Floor Other
Sample Venue	thdoor Outdoor Both NA	Indoor Outdoor Both NA	Indoor Outdoor Both NA
Sample Type	FB LB Other	FS FB LB Other	FS FB LB Other
Personnel Information:	<i>nnov</i>	ask <i>5 Ampliates</i>	
Sample Air Type	NA PA-EXC (PA-TWA.)	NA PA-EXC PA-TWA	NA PA-EXC PA-TWA
Flow Meter Type	NA Rotameter ØryCal	NA Rotameter <u>(DryCal</u>)	NA Rotametêy DryCal
Cassette .ot No 55449(§, 3)	2 Flow Meter ID 11001	then circle NA for "Pump Fo	mp ID" to "Sample Air Sjab How" wit" & enter O for Total Time & Quantity)
Pump ID	827427 -	-	~~~
Sample Air Start Date	3/24/18 -		\ \^23
Sample Air Start Time	842	/359	
Sample Air Start Flow (L/min)	2.54	2.09	Market Market
Sample Air Stop Date		->-	
Sample Air Stop Time	13:16 13:11	1559	
Sample Air Stop Flow (L/min)	2,0%	2.00	
Pump Fault	No NA Yes	NA Yes	No NA Yes
Sample Total Time (min)	274	120	
Sample Quantity (L)	559	2.45	
Field Comments			
Cassette Lot Number: (circle)			
Other			<u> </u>
v 032118		Lab: Katahdin Air Filter D	iameter = 37mm, Pore Size = 0.8µm

OC by For Field Team Completion - Completed by 💆 For Data Entry: Entered by:__ QC by:

Sheet No. <u>45</u>

ANACONDA FIELD SAMPLE DATA SHEET (FSDS) FOR PERSONAL AIR

School: <u>Headstart Łiń</u>	AAIII TAIAA			****		mpling Dat			
Other		•••			Fie	ld Logbool	< No: <u></u>	2/	
					Pa	ge No:	2		
Data Item					2			3	
Sample ID	l in	odnā	4	ĺγ	km Gi	mat			
Sampling Activities (circle all that apply)	Boiler Roo HVS3.Floc	eiling Tile, / m, Light Fix الراح عرار	dure, Attic,	Boiler Ro	Ceiling Tile, om, Light Fi: or دکری	xture, Attic,		Ceiling Tile som, Light F sor	
Location Description (circle all that apply)		Ground Flo 2nd Floor, 3			t, Ground Fl 2nd Floor, 3 r			nt, Ground I 2nd Floor or	
Sample Venue	(Indoor)	Outdoor	Both NA	(ridoor)	Outdoor	Both NA	Indoor	Outdoor	Both N
Sample Type	∕f\$) FB	LB Oth	er	FS)FB	LB Oth	er	FS FE	LB O	her
Personnel Information:	0/3	9,011	7 <u> </u>	ask <u>. / /</u> /	(5/ 5/	1,0/,	2		
Sample Air Type	NA PA-E	XC (PA-TV	(9)	NA PA-E	XC _V PA-TW	A" 's	WA PA-	EXC PA-TI	NA
Flow Meter Type	NA F				~			***	en
	l isu i	Rotameter	C fyCal ²	NA I	Rotameter	/ OryCal) NA	Rotamete	DryC
~	4			l MA I	(For Blanks '	'Z" through "Pu	mp ID" to "S	ample Air Sto	ıp Flaw"
~	Flow Met	er ID <u>//</u>		- -	(For Blanks '		mp ID" to "S	ample Air Sto	ıp Flaw"
Cassette .ot No <u>らみせのい</u>	Flow Met	erID <u>//</u> 549			(For Blanks '	'Z" through "Pu	mp ID" to "S	ample Air Sto	ıp Flaw"
Cassette _ot No <u>そみものでい</u> Pump ID	/2.4/ 8 Flow Meti @27	erID <u>//</u> 549			(For Blanks '	'Z" through "Pu	mp ID" to "S	ample Air Sto	ıp Flaw"
Cassette _ot No <u>Section</u> Pump ID Sample Air Start Date	Flow Meta 827 3/26	erID <u>//</u> 549		7	(For Blanks '	'Z" through "Pu	mp ID" to "S	ample Air Sto	ıp Flaw"
Cassette _ot No	8:42 8:42	erID <u>//</u> 549 9/13			(For Blanks '	'Z" through "Pu	mp ID" to "S	ample Air Sto	ıp Flaw"
Cassette _ot No	827 827 3/26 8:42 2.01	erID <u>//</u> 549 9/13			(For Blanks '	'Z" through "Pu	mp ID" to "S	ample Air Sto	ıp Flaw"
Cassette _ot No	/2.// 8 Flow Meto 927 3/26 6:42 2.01	erID <u>//</u> 549 9/13		7 7 7359 2.07	(For Blanks '	'Z" through "Pu	mp ID" to "S	ample Air Sto	ıp Flaw"
Cassette _ot No	8:42 3/26 8:42 2.01 3/26	erID <u>//</u> 549 9/13		7 7 7 7 3,59 2.07 7 7	(For Blanks '	'Z" through "Pu	mp ID" to "S	ample Air Sto	ıp Flaw"
Cassette _ot No	8:42 3/26 8:42 2.01 3/26 13/6 2.06	er ID <u>//C</u> 549 9//3 		2.07 ->- 2.07 ->- 1559 2.05	(For Blanks ' then circle A	Z" through "Pu IA for "Pump Fo	mp ID" to "S ruit" & enter	ample Air Sta O for Total Ti	p Flow** me & Quanti
Cassette _ot No	8:42 3/26 8:42 2.01 3)26 13/6 2.06	er ID <u>//C</u> 5-4-9 9//8 		7 7 7 2.07 3 1559 2.05 80)	(For Blanks ' then circle A	Z" through "Pu IA for "Pump Fo	mp ID" to "S ruit" & enter	ample Air Sta O for Total Ti	p Flow** me & Quanti
Cassette _ot No	2.01 3/26 2.01 3/26 2.01 3/26 2.06 2.06 2.06	er ID <u>//C</u> 5-4-9 9//8 		7 7 7 2.07 3, 7559 2.05 80 722	(For Blanks ' then circle A	Z" through "Pu IA for "Pump Fo	mp ID" to "S ruit" & enter	ample Air Sta O for Total Ti	p Flow** me & Quanti
Cassette _ot No	2.01 3/26 2.01 3/26 2.01 3/26 2.06 2.06 2.06	er ID <u>//C</u> 5-4-9 9//8 		7 7 7 2.07 3, 7559 2.05 80 722	(For Blanks ' then circle A	Z" through "Pu IA for "Pump Fo	mp ID" to "S ruit" & enter	ample Air Sta O for Total Ti	p Flow** me & Quanti

For Field Team Completion, Completed by QC by For Data Entry: Entered by QC by:_____

ANACONDA EJELO SAMPLE DATA SHEET (ESDS) FOR PERSONAL AIR

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School: Headstart	<u>(Lincoln İ</u>	Moodry High Memorial	Sampling Date: <u>3/24//8</u>
Other			Field Logbook No: 🗷 /
			Page No: 73

Data Item	1			2			3	
Sample ID	Lincolna	25	mer	n Gyy	n 25			_
Sampling Activities (circle all that apply)	Surface, Ceiling Tile, A Boiler Room, Light Fixt HVS3 Eloor Other	ure, Attic,	Boiler Roo	n .	Air Vent, xture, Attic, /		Ceiling Tile, oom, Light Fi oor	
Location Description (circle all that apply)	Basement, Ground Flo 1st Floor, 2nd Floor, 3r Main Floor Other			Ground F 2nd Floor			nt, Ground Fl , 2nd Floor, 3 or	
Sample Venue	Andoor Duidoor E	Both NA	didood	Outdoor	Both NA	Indoor	Outdoor	Both NA
Sample Type	FS XFB LB Othe	r	/FS) FB	LB Oil	ıer	FS FE	LB Oth	er
Personnel Information:	rncy Addi	<u>//</u> Д	ask <i>(](/_</i>	7 ,52	44,377	<u> </u>	j	
Sample Air Type	NA PA-EXC @A-DV		NA PA-E	XC (PA-TV	A) /	NA PA-	EXC PA-TW	Α
Flow Meter Type	NA Rotameter	_ ∕ OnyCai	<u>)</u> NA - F	otameter	CD _D CaD	NA	Rotameter	DryCal
Cassette .ot No <u>\$2.5649</u>	//・// G Flow Meter ID <u>//</u> ク				"Z" through "Pu VA for "Pump Fi		7.1	
Pump ID	86804		>				<i>기 (*</i>	•
Sample Air Start Date	3/26/2							
Sample Air Start Time	9:42		1359			0	1/	
Sample Air Start Flow (Umin)	2.67		2.15					
Sample Air Stop Date	2/2/2/165		>					
Sample Air Stop Time	1316		/5 8 3					
Sample Air Stop Flow (L/min)	276		2.74					
Pump Fault	(No NA	Yes	(Na)	NA	Yes	No	NA	Yes
Sample Total Time (min)	274		/20					
Sample Quantity (L)	580		25	7				
Field Comments								
Cassette Lot Number: (circle) 50609								
Other v 032118			Lab: Ki				7mm; Pore Si	

v 032118

Lab: Katahdin Air Filter Diameter = 37mm; Pore Size = 0.8µm

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FINELULA TILLIA CONTRACTOR CONTRACTOR	u. 2/2/ Anu. (ii)	For Data Entry — Entered by	neu.
For Field Team Completion. Completed		rui Data Cituy. Citicicu Dy.	
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ANACONDA FIELD SAMPLE DATA SHEET (FSDS) FOR PERSONAL AIR														
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	Field Logbool Page No:	k No:
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Membymiles Fruc	(Blank	10
Surface, Ceiling Tile, Air Vent, Boiler Room, Light Fixture, Attic, HVS3 Floor Other	Surface, Celling Tile, Air Vent, Boiler Room, Light Fixture, Attid, HVS3 Floor Other	Surface, Ceiling Tile, Air Vent, Boiler Room, Light Fixture, Attic, HVS3 Floor Other
Basement, Ground Floor, 1st Floor, 2nd Floor, 3rd Floor, Main Floor Other	Basement, Ground Floor, 1st Floor, 2nd Floor, 3nd Floor, Main Floor Other	Basement, Ground Floor, 1st Floor, 2nd Floor, 3rd Floor, Main Floor Other
(Indoor) Outdoor Both NA	Indoor Øutdoor Both NA	Indoor Outdoor Both NA
FS (FB) LB Other	FS FB LB Other/	FS FB LB Other
eld Blank Te	ask	
NA PA-EXC PA-JWÁ	NA PA-EXC PA-TWA	NA PA-EXC PA-TWA
NA Retameter DryCal	NA Rotámeter DryCal	NA Rotameter DryCal
Fl		mp ID" to "Sample Air Stop Flow"
riow ineterin	. then circle has for "Pump ro	iur a emeru jor rotti iime a quontny,
312/01/19		/
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No. / NA Yes	No NA \V Yes	No NA Yes
J)	3.17	
	/	
Field Blank		
	Surface, Ceiling Tile, Air Vent, Boiler Room, Light Fixture, Attic, HVS3 Floor, Other Basement, Ground Floor, 1st Floor, 2nd Floor, 3rd Floor, Main Floor Other Indoor Outdoor Both NA FS (FB LB Other NA PA-EXC PA-DWA NA Retameter DryCal Flow Meter ID 3/20//6 13.55	Surface, Ceiling Tile, Air Vent, Boiler Room, Light Fixture, Attic, HVS3 Floor, Other Other Other Indoor Outdoor Both NA Indoor Outdoor Both NA FS FB LB Other FS FB LB Other PLA BLAW Task NA PA-EXC PA-TWA NA Rotameter DryCal NA Rotameter DryCal Flow Meter ID Surface, Ceiling Tile, Air Vent, Boiler Room, Light Fixture, Attic, HVS3 Floor, Other Other Other Other Other Other Place of the property of the p

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School: <u>Headstart Li</u> Other	ncoln Moodry High Memori	ial Sampling Date Field Logbook Page No: <u>/</u> /	No: <u>0/</u>
Sampling Team: CDM	Smith Other Name		
Data Item	1	2	3
Sample ID	MEMEY-MANFLOODEROS	MGM64MFLOORFINSASEOOT	MEMBYAH VELONOCE
Location (e.g., room number, etc.)	157 FLOOR BALL COUNT	RINATE	GNO FLOOR SOUTH OFFISH
Sample Group (circle)	Bare Floor: Tile, Laminate, (Vood) Carpet: Plush, Level Loop, Multilevel, Shag, Floor Mat Other	Bare Floor: Tile, Laminate, Wood Carpet: Plush, Level Loop, Multilevel, Shag, Floor Mat Other	Bare Floor: Tile, Laminate, Wood Carpet: Plush, Level Loop, Multilevel, Shag, Floor Mat Other
Location Description (circle)	Basement, Ground Floor,	Basement, Ground Floor, 1st Floor, 2nd Floor, 3nd Floor, Main Floor Other	Basement, Ground Fleor, 1 st Floor, 2 nd Floor, 3 nd Floor, Main Floor Other
Matrix Type (circle)	Floor Dust Tracked in Dirt Other	Floor Dust Tracked in Dirt Other Respect	Floor Dust Tracked in Dirt Other
Category (circle)	FS D-(duplicate) RB-(rinsate) SB-(sand blank)	FS D-(duplicate) (RB-(rinsate) SB-(sand blank)	(F) D-(duplicate) RB-(rinsate) SB-(sand blank)
Sample Parent ID (if a duplicate sample)		4646444466	
Approximate Sample Area (circle units)		cm² m² in² ft²	cm² m² in² €
HVS3 Vacuum ID No.	A	A	4
Leak Check? (circle)	No 79s	No Yé s	No Yes
20 sec cleaning @ end? (circle)	No (es)	No Yes	No YES
Total Sample Time		7 minutes	
Flow Drop	<u>£</u> inches of water	7 inches of water	
Nozzle Drop	/O_inches of water	O inches of water	inches of water
Field Comments Bottle Lot Number: (circle) 1219756 1213332	STARTING WEIGH: 3930 END 48.983	SALTE SALES	\$1705 END: 54.133
Other	DECON® 140	DECON @ 1505	Decon @
v 032118		Lab: CLP Container: F	IVS3 Catch Bottle = 250 mL LOPE
For Field Team Completion (Initials)	Completed by). OC by:	or Data Entry Entered by: QC by:	

Sheet No.: 2

Other			No: <u>0</u> /
Sampling Team: CDM	Smith)OtherName	Page No: <u>3</u> e(s): Ben Simpson	
Data Item	1	2	3
Sample ID	MenGymHVFlmat001	Mem Gym HV Flowet Rivings	Membyn HVFloor 002
Location (e.g., room number, etc.)	West 6th St. Entrance	NA	Locker room A
Sample Group (dircle)	Bare Floor: Tile, Laminate, Wood Carpet: Plush, Level Loop, Multilevel, Shag Floor Mat Other	Bare Floor: Tile, Laminate, Wood <u>Carpet</u> : Plush, Level Loop, Multilevel, Shag, Floor Mat Other	Bare Floor (Tile) Laminate, Wood Carpet: Plush, Level Loop, Multilevel, Shag, Floor Mat Other
Location Description (circle)	Basement, Ground Floor, 1 st Floor, 2 nd Floor, 3 rd Floor, Main Floor Other Sharys	Basement, Ground Floor, 1st Floor, 2 nd Floor, 3 nd Floor, Main Floor Other	Basement, Ground Floor, 1 st Floor, 2 nd Floor, 3 nd Floor, Main Floor Other
Matrix Type (circle)	Floor Dust Tracked in Dirf Other	Floor Dust Tracked in Dirt Other_STRA Sand	Floor Dust Tracked in Dirt Other
Category (circle)	(FS) D-(duplicate) RB-(rinsate) SB-(sand blank)	FS D-(duplicate) RB-(rinsate) SB-(sand blank)	FS D-(duplicate) RB-(rinsate) SB-(sand blank)
Sample Parent ID (if a duplicate sample)	N/A	N/A	N/A
Approximate Sample Area (circle units)	cm² m² in² ft²	► N/A cm² m² in² ft²	350cm² m² in/fi
HVS3 Vacuum ID No.	B	B	3
Leak Check? (circle)	No (Yes)	No (Yes)	No (Yes)
20 sec cleaning @ end? (circle)	No (Yes)	No (Yes)	No (Yes)
Total Sample Time	4 minutes	<u>U</u> minutes	
Flow Drop	5 inches of water	Inches of water	5 inches of water
Nozzle Drop	10 inches of water	anches of water	ginches of water
Field Comments	394 = Shif weight	38.93 is Buttle weight	38.66 = Bothe
Bottle Lot Number: (circle) 1219755 1213332	394 = Sturt weight 81.45 = Final weight	48.24= Bathe m/ Sand	48.418=Final
Other	Decome 1420	peum @ 1500	pecon @ 1525

For Data Entry

Entered by:

Completed by OC by: 4/1

For Field Team Completion

(Initials)

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School: Headstart	Lincoln (Moodry.)	ligh Memorial	Sampling Date	27 17
Other			Field Loabook No:	01
			Page No:	
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Data item				2			3	
Sample ID	Modrypeshe	43	211/4		,			
Sampling Activities (circle all that apply)	Surface, Ceiling Tile, Air Ve Boiler Room, Light Fixture, / HVS3 Floor Other			eiling Tile, . m, Light Fo)r			Celling Tile, / om, Light Fix or	
Location Description (circle all that apply)	Basement, Ground Floor, 1st Fleor,∕Znd Floor, 3rd Flo Main Floor Other	of.	Basement	Ground Fli 2nd Floor, 2			l, Ground Flo 2nd Floor, 3 r	
Sample Venue	(Indoor) Outdoor Both	NA	Indoor	Outdoor	Both NA	Indoor	Outdoor	Both NA
Sample Type	FS JFB) LB Other	-	FS FB	/LB Oth	91	F5 FB	LB Oth	\$f
Personnel Information:	eld Black	т.	ask					
Sample Air Type	NA PA-EXC PA-TWA		NA/PAE	KG PAGW	A	NA PAE	XC PA-TW	Ą
Flow Meter Type	NA Rotameter D	ryCal	NA F	Cotameter	DryCal	NA	Rotameter	DryCal
Cassette ot No	Flow Meter ID N	7				N 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	omple Air Stop O for Total Tim	
Pump ID		7				Z		
Sample Air Start Date		7						
Sample Air Start Time	800				αX			
Sample Air Start Flow (Limin)	NAY I				1			
Sample Air Stop Date	2/21/0 C Y			1	7			4
Sample Air Stop Time				3)				
Sample Air Stop Flow (L/min)								
Pump Fault	No NA Y	99.	No	/NA	Yes	No	NA	Yes
Sample Total Time (min)								
Sample Quantity (L)	/							
Field Comments Cassette Let Number: (circle)	held Blank							
Other			<u> </u>	stabrin			7mm Pare Si	

v 032118

Lab: Katahdin

Air Filter Dlameter = 37mm; Pore Size = 0.8pm

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For Field Team Completion Completed by	

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Other						ld Logbool ge No	50146140011400011400001400001	<u> </u>				
Data Item					2							
Sample ID	Μα	dry	70									
Sampling Activities (circle all that apply)	Surface, Cei Beiler Room HVS3 Floer Other	, Light Flxts	ire, Attic,			Air Vent, xture, Attic,		elling Tile, / on: Light Fix or				
Location Description (circle all that apply)	(issement 0 1st Floor 2n Main Floor Other	Bround Flac	й,		, Ground Fl 2nd Floor, :			, Ground Flo 2nd Floor, 3i				
Sample Venue	Indoor/ O	Juldoor B	oth NA	Indoor	Outdoor	Both NA	Indoor	Outdoor I	Bath N/			
Sample Type	FS FB	LB Other		FS FB	LB Oth	let	F8 F8	LB Othe	ır			
Personnel Information:				L			3					
IDName	5.044	5011	T	ask								
Sample Air Type	NA PA-EX				XC PA-TW		NA PA-E	XC PA-TW/	4			
Flow Meter Type	NA Ro	otameter	(DryCal	NA F	Rotamater	DryCal	NΛ	Rotameter	DryCa			
				4					et Carried C			
Cassette .ot No <u>50009</u>	Flow Meter	rid <i>//60</i>	7			"2" through "Pi VA for "Pump F						
Cassette .ot No <u>ちんかう</u> Pump ID	Flow Meter	rio <i>//60</i> 6-3	/			"2" through "Pi						
Cassette .ot No <u>50009</u>	Flow Metal 868 0 5127 78	rio <i>//60</i> 6-3				"2" through "Pi						
Cassette .ot No <u>SOUOS</u> Pump ID Sample Air Start Date	Flow Metal 848 0 3127/18 2:00	rio <i>//60</i> 6-3)			"2" through "Pi						
Cassette _ot NoOO Pump ID Sample Air Start Date Sample Air Start Time Sample Air Start Flow (Limin)	Flow Metal 868 0 31271/8 8:00	rio <i>//60</i> 6-3	· /			"2" through "Pi						
Cassette .ot No <u>SO(() C</u> Pump ID Sample Air Start Date Sample Air Start Time	Flow Meter 51271/8 8:08 2:04 3127/6	rio <i>//60</i> 6-3) <u> </u>			"2" through "Pi						
Cassette _ot No	Flow Metal 868 0 3127 18 8:00 2.04 3127 18	rio <i>//60</i> 6-3				"2" through "Pi						
Cassette _ot NoOC	Flow Metal 868 0 3127 18 8:00 2:04 3127 16 1575 2:12	rio <i>//60</i> 6-3	Yes	No		"2" through "Pi						
Cassette .ot No	Flow Metal 868 0 3127 18 8:00 2.04 3127 16	r ID <u>//6/</u> 6-3			then circle !	"2" through "Pr VA for "Pump F	oult" & enter (o for Total Time	S Quantity			
Cassette Lot No SOLO 9 Pump ID Sample Air Start Date Sample Air Start Flow (L/min) Sample Air Stop Date Sample Air Stop Time Sample Air Stop Flow (L/min) Pump Fault	Flow Metal 868 0 3127 18 8:00 2:04 3127 16 1575 2:12	r ID //60			then circle !	"2" through "Pr VA for "Pump F	oult" & enter (o for Total Time	S Quantity			
Cassette of No SOLO C Pump ID Sample Air Start Date Sample Air Start Time Sample Air Start Flow (Limin) Sample Air Stop Date Sample Air Stop Time Sample Air Stop Flow (Limin) Pump Fault Sample Total Time (min)	Flow Metal 868 0 3127 18 8:00 2:04 3127 16 1575 2:12	r ID //60			then circle !	"2" through "Pr VA for "Pump F	oult" & enter (o for Total Time	S Quantity			
Cassette Lot No Lot Of Pump ID Sample Air Start Date Sample Air Start Time Sample Air Stop Date Sample Air Stop Date Sample Air Stop Time Sample Air Stop Flow (Limin) Pump Fault Sample Total Time (min) Sample Quantity (L)	Flow Metal 868 0 3127 18 8:00 2:04 3127 16 1575 2:12	r ID //60			then circle !	"2" through "Pr VA for "Pump F	oult" & enter (o for Total Time	S Quantity			
Cassette .ot No Supple Air Start Date Sample Air Start Time Sample Air Start Flow (L/min) Sample Air Stop Date Sample Air Stop Time Sample Air Stop Flow (L/min) Pump Fault Sample Total Time (min) Sample Quantity (L) Field Comments Cassette Lot Number: (circle)	Flow Metal 868 0 3127 18 8:00 2:04 3127 16 1575 2:12	r ID //60			then circle !	"2" through "Pr VA for "Pump F	oult" & enter (o for Total Time	S Quantity			

Sheet No.

ANACONDA FIELD SAMPLE DATA SHEET (FSDS) FOR PERSONAL AIR Sampling Date: 3/27/18School: Headstart | Lincoln | Moodry I High | Memorial Field Loabook No: 01 Other Page No: Data ilem NathradSample ID Surface, Calling Tile, Air Vent, Surface, Ceiling Tile, Air Vent, Surface, Ceiling Tile, Air Vent, Sampling Activities Boiler Room, Light Fixture, Atlic, Boiler Room, Light Fixture, Attic, Boiler Room, Light Fixture, Altic. (circle all that apply): HVS3 Floor HVS3 Floor HVS3 Floor Other Other, Other Bassment, Ground Floor, Basement, Ground Floor, Basement, Ground Floor, Location Description 1st Floor, 2nd Floor, 3rd Floor, 1st Floor, 2nd Floor, 3rd Floor, 1st Floor, 2nd Floor, 3rd Floor, Main Floor Main Floor Main Floor (circle all that apply) Other Other Other Indoor Sample Venue Outdoor Both NA Indoor Outdoor Both NΑ Indoor Outdoor Both NA ìғв LB Other FS FB FS FB LB Other Sample Type LB Other Personnel Information: Name Street NA PA-EXC ÉA-TWA NA PA-EXC PA-TWA NA PA-EXC PA-TWA Sample Air Type NA (DryCal Flow Meter Type Rotameter NA Rotameter **DryCal** NA Rotameter DryCal Cassette (For Blanks "Z" through "Fump ID" to "Sample Air Stop Flow". .ot No _____ Flow Meter ID //20/ tiren circle NA for "Pump Pault" & miter 0 for Total Time & Quantity) Pump ID 627560 Sample Air Start Date 1/27//6 Sample Air Start Time Sample Air Start Flow (L/min) 2.08 Sample Air Stop Date Sample Air Stop Time Sample Air Stop Flow (Umin) No Pump Fault NA Yes No NA Yes No NA Yes Sample Total Time (min) 797 Sample Quantity (L) **Field Comments** Cassette Lot Number: (circle) 50609 Other v 032118 Lab: Kalahdin Air Filter Diameter = 37mm; Pore Size = 0.8um.

For Field Team Completion: Completed by QC by For Data Entry. Entered by QC by						
	For Field Team Completion: Cor	optated by QC	by For D	ata Entry Entered (oyOC by	

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ANACONDA FIELD SAMPLE DATA SHEET (FSDS) FOR PERSONAL AIR

School: <u>Headstart Lin</u> Other	***************************************				Fiel	d Logboo	e <u>5/2</u> k No: <u>0</u> // <i>b</i>		
Data item		1			2			ä	
Sample ID	1///	odn,	1,23						
Sampling Activities (circle all that apply)	Surface, C Boiler Root HVS3 Floo Other	m, Ught Fii r	dure, Attic,		eiling Tile, / ım, Light Fix xı		Surface, Co Boiler Roor HVS3 Floo Other	n, Light Fix	
Location Description (circle all that apply)	Bassmant 1st Floor Main Floor Other	Ground Fl ad Floor	oot/		Ground Flo 2nd Floor, 3		Basement, 1st Floor, 2 Main Floor Other		
Sample Venue	Indoor	Outdoor	Both NA	Indoor	Outdoor	Both NA	Indoor	Duldoor	Both NA
Sample Type	FS JFB	LB Oth	er	FS FB	LB Othe	H	FS FB	LB Othe	ır
Personnel Information (1) 17		leu	Ţ	356			<u>. </u>		
Sample Air Type	NA PA-E		/A	NA PA-E	XC PATW	۸ .	NA PAEX	C PA-TW/	\
Flow Meter Type Cassette .ot No. 50 409	L	totameter or ID <u>//</u>	DiyCal	NA F			NA R imp ID* to "Son suit" & onter 0		
Pump ID	,	427							
Sample Air Start Date	3/2.7	'// <i>e</i> a							
Sample Air Start Time	200								
Sample Air Start Flow (L/min)	2.07								
Sample Air Stop Date	277176								4
Sample Air Stop Time	1515								
Sample Air Stop Flow (Umin)	2,211								
Pump Fault	No	[®] NA	Yes	No	NA	Yea	No	NA	Yes
Sample Total Time (min)		97							
Sample Quantity (L)	195	97,9							
Field Comments	4/1/10								
Casaette Lot Number: (circle) 90609 Other									

For Field Team Completion: Completed by: A QC by: For Data Entry: Entered by: QC by:

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ANACONDA FIELD SAMPLE DATA SHEET (FSDS) FOR PERSONAL AIR

School: <u>Headstart</u>	Lincoln Moodry) High I Memorial	Sampling Date:	191 19
Other			Field Logbook No: _	7)
			Page No	

Data item	1			2				
Sample ID	Moodry	24						
Sampling Activities (circle all that apply)	Surface, Ceiling Tile, A Boiler Room, Light Fix HVS3 Floor Other (2007)	iure, Attic.		elling Tile, A m, Light Flx m			Ceiling Tile, A om, Light Fixt or	
Location Description (circle all that apply)	Basement Ground Flo 1st Floor 2nd Floor, 3 Main Floor Other	ω,		Ground Flo 2nd Floor, 3			t, Ground Flo 2nd Floor, 3r r	
Sample Venue	(Indoor) Ouldoor I	3oth NA	Indoor	Outdoor	3oth NA	Indoor	Outdoor I	Both NA
Sample Type	F8 FB LB Othe	ř	FS FB	LB Othe	r	FS FB	L8 Othe	ı(
Personnel Information:	DESCOHE	<u> </u>	3164 <u>///</u> 5		11/25			
Sample Air Type	NA PA-EXQ PA-TW	<i>X</i>	NA PA-E	KC PA-TW/	ı Ü	NA PA-E	XC PA-TW/	(
Flow Meter Type	NA Rotameter	(DryCal	NA F	lotameter	DryCal	NA	Rotameter	DryCal
Cassette .ot No <u>5040</u> 3	Flow Meter ID	,0/					mple Air Stop I O for Total Time	
Pump ID	627549							
Sample Air Start Date	3/27//8							
Sample Air Start Timo	8:08							
Sample Air Start Flow (Umin)	2.02							
Sample Air Stop Date	21.77							
Sample Air Stop Time	1359							
Sample Air Stop Flow (Limin)	2.02							
Pump Fault	/No NA	Yes	No	NA	Yes	No	NA	Yes
Sample Total Time (min)	Seer S.							
Sample Quantity (L)	1,25							
Field Comments	12/2							
Cassette Lot Number: (circle) 50609								
Other								
υ በ3211R			Lab: K	stabelie	Air Piller I	Vicernatur - T	žmar Pare Sbr	a = 0 Rum

v 032118

Lab: Katahdin Air Filter Diameter = 37mm; Pore Size = 0.8pm

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ANACONDA FIELD SAMPLE DATA SHEET (FSDS) FOR PERSONAL AIR

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School	: Headstart	Lincoln	Moodry\ H	ah i Mei	morial		Samp	ling Date: 🔛		177	
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Unia item					- 2			3	
Sample ID	Moo	deq	25						
Sampling Activities (circle all that apply)	Surface, Ce Boiler Room HVS3 Floor Other	ı, Light Fix	ture, Attic.		eiling Tile, / m, Light Flx ir			eiling Tile, i m, Light Fix ir	
Location Description (circle all that apply)	(Sasament) ((St Floot) 2r Main Floor Other	Sround Fl	oor		Ground Flo 2nd Floor, 3			Ground Flo 2nd Floor, 3	
Sample Venue	(Indoor C	Outdoor	Both NA	Indoor	Outdoor	Both NA	Indoor	Outdoor	Both NA
Sample Type	FS FB	LB Oth	Bf	FS F8	LB Othe	rr	FS FB	LB Oth	Br
Personnel Information: ID <u>25</u> Name <u>A/A</u> AA	e 4 12/		۲ ۲	ask		7.1.7	15		
Sample Air Type	NA PA-EX	C (PA-TV	/A)	NA PA-E	XC PAITW	A.	NA PAE	XC PATW	Α
Flow Meter Type	NA R	otameter	(DryCal	INA F	lotameter	DryCal	NA I	Rotameter	DryCa
Cassette ot No. <u>50 (y 09</u>	Flow Meter	r10 <u>/</u>	00/	-			ump ID" to "Sa ault" & enter C		
tre. 100c	ACT / 723			T			8		
Pump ID	600		<i>y</i> e						
Sample Air Start Date	3/27/		*						-
Sample Air Start Date	3/27/								
Sample Air Start Date Sample Air Start Time	3/27 0808	//8							
Sample Air Start Date Sample Air Start Time Sample Air Start Flow (L/min)	3/27/ 0808 2.09	//8							
Sample Air Start Date Sample Air Start Time Sample Air Start Flow (L/min) Sample Air Stop Date	3/27/ 0808 2.09 3/27/18	//8							
Sample Air Start Date Sample Air Start Time Sample Air Start Flow (L/min) Sample Air Stop Date Sample Air Stop Time	3/27/ 0808 2.09 3/27//8 15/5 2.15	//8	Yes	No	NA	Yes	Nio	NA	Ýes.
Sample Air Start Date Sample Air Start Time Sample Air Start Flow (L/min) Sample Air Stop Date Sample Air Stop Time Sample Air Stop Flow (L/min)	3/27/ 0808 2.09 3/27//8 /5/5 2.15	//8 //MA		No	NA	Yes	No	NA.	Yes
Sample Air Start Date Sample Air Start Time Sample Air Start Flow (L/min) Sample Air Stop Date Sample Air Stop Time Sample Air Stop Flow (L/min) Pump Fault	3/27/ 0808 2.09 3/27//8 /5/5 2.15	//8		No	NA	Yes	No	NA.	Yes
Sample Air Start Date Sample Air Start Time Sample Air Start Flow (Limin) Sample Air Stop Date Sample Air Stop Time Sample Air Stop Flow (Limin) Pump Fault Sample Total Time (min)	3/27/ 0808 2.09 3/27/18 15/5 2:15 (No)	//8 //MA		No	NA.	Yes	No	NA.	Yes
Sample Air Start Date Sample Air Start Time Sample Air Start Flow (L/min) Sample Air Stop Date Sample Air Stop Time Sample Air Stop Flow (L/min) Pump Fault Sample Total Time (min) Sample Quentity (L)	3/27/ 0808 2.09 3/27/18 15/5 2:15 (No)	//8 //MA		No	NA NA	Yes	No	NA.	Yes

For Field Team Completion: Completed by CG by: For Date Entry: Entered by: QC by:

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ANACONDA FIELD SAMPLE DATA SHEET (FSDS) FOR HVS3 FLOOR DUST Sampling Date: 3/27/2018 School: Headstart | Lincoln Moodry | High | Memorial Field Lagbook No: __#6. 🕖 Other Page No: Name(s): Ben Simpson Sampling Team: (CDM Smit) Other Data Item 4 Moodry HV Flmat Rinsalt 10 Moodry HV Floor 002 Sample ID MoodinalVFIMatood Location South Door w/A Cateleria (e.g., room number, etc.) Barn Floor: Tile, Lominate, Wood Bare Floor: Tile, Laminate, Wood Bare Floor: Tile, Laminate, Wood Sample Group Carpet Plush, Level Loop, Carpet, Plush, Level Loop, Camet: Plush, Level Loop, Multitevet, Shag,(Floor Mat) Mulillevel, Shag, Floor Mat. Multilevel, Shag, Floor Mat (circle) Other RASSIL Other Other Basement, Ground Floor, Basement, Ground Floor, Basement JGround Floor, Location Description 1st Figur**)**2rd Floor, 3° Floor. 1st Floor, 2nd Floor, 3nd Floor, 1st Floor, 2nd Floor, 3nd Floor, Main Floor Main Floor Main Floor (circle) RAGAR Other Other Other Floor Dust (Floor Dust.) Floor Dust Matrix Type Tracked in Dirt Tracked in Dirt Tracked in Dirt (circle) Omer Other Other (FS) D (duplicate) RB-(riosate) FS D-(duplicate) (488-(rinsate) FS) D-(duplicate) R8-(nnsate) Category (circle) SB-(sand blank) SB-(sand blank) SB-(sand blank) Sample Parent ID N/A №/Д (if a duplicate sample) w/A 30 Approximate Sample om" m" in/ft/1 cm² m² in² ft² cm² m² in²/ft² Area (circle units) R HVS3 Vacuum ID No. 8 No Leak Check? (circle) No (Yes) Yes No Yes 20 sec cleaning @ end? Yes No Yes No No (circle) J 8 4 Total Sample Time minutes minules minutes 5 S 10 Flow Drop inches of water inches of water inches of water Nozzle Drop inches of water inches of water inches of water 38.94= Bottle 38.90g= Bottle weight weight 48.30g= Final 48.10g= 4/5111ch Weight 47.40g= Final Weight 38.82 4 = Boltle weight **Field Comments** Bottle Lot Number: 50.37% = Final washt (circle) 1213332 Other Decore 19850 0000 @0805 Decomp 925

	v 032118				Lab: CLI	Containe	r HVS3 Catch	. Battle = 250 m	IL LOPE
Ĭ				01/					
ı	For Field Team	Completion	Completey by	<u>14/</u>	For Data Entry	Entered	by:		
ı	(Indiasa)		асы, <u>Д</u> Д_			MA LO			
1	Essentantel		A 464	-		QC by:	************		

Sheet No.: _______

Other	ncoln Moodry High Memori	Field Logbook Page No/	
	Smith Other Name	e(s): <u>Coamor Keusy</u>	
Data Item	1	2	3
Sample ID	MODERY HY FLARES	MOODRY HY ROCKOTO	MODRY HY FLOOR OIL
Location (e.g., room number, etc.)	1st floor MAIN DOOR	3rd Floor Ruso	3RD FLOOR RASY
Sample Group (circle)	Baro Floor: Tile, Laminate, Wood Carpet: Plush, Level Loop, Multilevel, Shag, Floor And Other	Bare Floor: Tile, Caminale, Wood Carpet: Plush, Level Loop, Multilevel, Shag, Floor Mat Other	Bare Floor: Tile, (amingto, Wood Carpet: Plush, Lever Loop, Multilevel, Shag, Floor Mat Other
Location Description (circle)	Basement, Ground Floor, 1 st Floor, 2 nd Floor, 3 nd Floor, Main Floor Other	Basement, Ground Floor, 1 st Floor, 2 st Floor, ₹ [®] Floof, Main Floor Other	Basement, Ground Floor, 1 st Floor, 2 rd Floor Main Floor Other
Matrix Type (circle)	Fleor Dust Fracked in Dirf Other	Floor Dust Tracked in Dirt Other	Floor Dost Tracked in Dirt Other
Category (circle)	F52D-(duplicate) RB-(rinsate) SB-(sand blank)	D-(duplicate) RB-(rinsate) SB-(sand blank)	(FS XX-(duplicate) RB-(rinsate) SB-(sand blank)
Sample Parent ID (if a duplicate sample)			
Approximate Sample Area (circle units)		SScm² m² in² Ø	_130cm² m² ln²(j)
HVS3 Vacuum ID No.	Α		A
Leak Check? (circle)	No. <u>(6</u>)	No Yes	No (To)
20 sec cleaning @ end? (cirde)	No 🚱	No Q	No Vee
Total Sample Time	4.5 minutes	75 minutes	>
Flow Drop		inches of water	5 inches of water
Nozzie Drop	10 inches of water	/O inches of water	10 inches of water
Field Comments Bottle Lot Number: (ctrale) 1219755	SPAPENG NESAHT! 389\$g END: 174.55	smersing wester 345g END 95:75g	STARTYMENTS ON P. 38.93
Other	Decore 0830	Decon@ 0905	Decorp 0945
032116	<i>y</i> ,	Lab; GLP Container; i	fVS3 Catch Boltle = 250 mL LOPE
or Field Team Completion Initials)	Completed by:	For Data Entry Entered by: QC by:	

Sheet No.; _____

ANACONDA FIELD SAMPLE DATA SHEET (FSDS) FOR HVS3 FLOOR DUST Sampling Date: 3/27/2018 School: Headstart | Lincoln (Moodry) High | Memorial Field Logbook No. 0/ Other Page No. 10 Name(s): <u>Βω δινήμι</u>σ Sampling Team: (CDM Smitt) Other Data Item Moodry HVFloor OOD Mostry HV Floor 003 Mondry HVFloor 004 Sample ID Location Buys Locker Rown Computer/IT Lab (e.g., room number, etc.) (Earc Floor) Tile (Caminaty) Wood Bare Floor, Tile, Laminate, Wood <u>Bare Floor</u>√File, Laminate/Wood Sample Group Carpet Plach Levett Cop. Carpe) Plush, Level Loop. Carpet Plush, Level Loop, Multilevel, Shaq, Floor Mat Mullilevel, Shap, Floor Mat. Multilevel, Shag, Floor Mat. (circle) Other Other: Other Basement)Ground Floor, Basement Ground Floor, Basement, Ground Floor, 1º Floor 2º Floor 3º Floor TEFROI, 2" Floor, 3" Floor, **Location Description** (1º Floog) 2º Floor, 3º Floor, Main Floor Main Floor Main Floor (circle) Other Other Other Floor Dust_) (Floor Dus), Floor Dust) Matrix Type Tracked in Dirt Tracked in Dirt Tracked in Dirt (circle) Other Other Other FS) U-(dupicate) R8-(rinsate) FS/ D (duplicate) RB-(rinsate) (FS) D-(duplicate) R8-(finsate). Category (circle) SB-(sand blank) SB-(sand blank) SB-(sand blank) Sample Parent ID M/h (f a duplicate sample) 500 50 Approximate Sample can² m² in∦fr} 100 cm² m² in/ft²) cm² m² in²yft²) Area (circle units) A K R HVS3 Vacuum ID No. (10s) Leak Check? (circle) No Yes) No (Yes) No 20 sec cleaning @ end? Yes Nes No Nn No (Yes∖ (circle) 6 **Total Sample Time** minutes minutes minutes 5 4 Flow Drop inches of water inches of water inches of water Nozzie Drop inches of water inches of water inches of water 39.06= Bothe Weight Field Comments Bottle Lot Number: (circle) 713737 Other Decon @ 1150 Dason @ 1050

v 082118		Lab: CLP	Container: HVS3 Catch	r Bottle = 250 mt. LDPE
For Field Team Completion Comp (toltials) QC by	neted by W	For Data Entry	Entered by: QC by:	

Sheet No.: 💾

ANACONDA FIELD SAMPLE DATA SHEET (FSDS) FOR HVS3 FLOOR DUST School: Headstart | Lincoln | Moodry | High | Memorial Sampling Date: 3/27/75 Field Loabook No: 🧳 Other Page No. 10 Sampling Team: CDM Smith Other Name(s): (A. Wak Kalut of Y 4 Data Item 3 Sample ID MODORYHY FLOORSO'S MODBLYKY COOKOIS 1/400KY)|VFLAX609 Location IND FLOOR ROOM 25 3RD FLOOR BALL 2-00 FLOOR ROOM W (e.g., room number, etc.) Bare Floor: Tile (Laminater, Wood Bare Floor, Tile Camingte, Wood Baro Floor Tiles Caningse, Wood Sample Group Carpet Plush, Levett.cop. Carpet Plush, Level Loop, Carpet Plush, Level Loop, Multilevel, Shaq, Floor Mat. Multilevel, Shaq, Floor Mat. Muttilevei, Shaq, Floor Mat (circle) Other Other Other Basement, Ground Floor, Basement, Ground Floor, Basement, Ground Floor, **Location Description** 1º Floor, 2º Floor (J. Floor) 1º Floor (2ºº Floet, 3º Floor, 1" Floor, & Floor, 3" Floor, Main Floor Main Floor Main Floor (circle) Other Other Other Moor Oud FROOT DIJAI Moor Duit Matrix Typo Tracked in Dirt Tracked in Dirt Tracked in Dirt (circle) Other Other FSZD (duclicate) RB (rinsate) イプ D-(duplicate) RB-(rinsete) (7) D-(duplicate) RB-(finsate) Category (circle) SB-(sand blank) SB-(sand blank) SB-(sand blank) Sample Parent ID (if a duplicate sample) 19.0 2.N/ Approximate Sample cmi mi ini 10 cm² m² in(¶/ (2.5 cm² m² in? fi?) Area (circle units) А HVS3 Vacuum ID No. Leak Check? (circle) No Koy No γW No /YES7 20 sec cleaning @ end? 10 No mil No Y#9 Nin (aircle) /2 Total Sample Time minutes minutes minutes inches of water _C' inches of water Flow Drop inches of water Nozzle Drop /2 inches of water inches of water inches of water (TXXT246 1.AI 6/1/39/00) stapping witch: 31% STARTS OF MESCHIFTER TH Field Comments Eno:47,12, Era 47.0, Bottle Lot Number: 640 45.44 (circle) 1219755 1213332

v 632118	Lab: CLP	Container: HVS3 Catch Bottle = 250 mL LDPE
For Field Team Completion Completed by (initials)	For Data Entry	Entered by:
(initials) QC by: 1/1/		QC by:

Econ81105 Decomp 1155

Other

KIONE INV

Sheet No : 5

ANACONDA FIELD SAMPLE DATA SHEET (FSDS) FOR HVS3 FLOOR DUST School: <u>Headstart | Lincoln | Mccdry) High | Memorial</u> Sampling Date: <u>ろ/タカ/テク</u> Field Logbook No: Ol Other Page No: 10 Name(s): Cover. Kowey Sampling Team: /CDM Sm/th Other 1 3 Data Item MOODRYNY FLOCERSMAN & MODRY HY FLOOR DOWN Sample ID Alternative Commence 2 NO FLOOR Location DIMO FLOW (e.g., room number, etc.) 100 JJ Acres 30 <u>Bare Floor</u>: Tile, Laminate, Wood Bare Floor: The, Laminate, Wood Bare Floor, Tile, Laminate, Wood Carpet Plush, Level Loop, Sample Group Carpet Cluph, Level Loop, Carpet PICE), Level Loop, Multifevel, Shap, Floor Mat. Multilavel, Shag, Floor Mat Multilevel, Shag, Floor Mat (circle) Other 1-2A Other Other Basement, Ground Floor, Basement, Groupd Floor, Basement, Ground Floor, 1st Floor (2st Floor, 3st Floor, 1" Floor, 2" Floor, 3" Floor, 1st Floor, 2st Floor, 3st Floor, **Location Description** Main Floor Main Floor Main Floor (dirdle) OFFILE REPLACE Other Other Aloot Diski Floor Dust Ploor Dust Matrix Type Trackéd in Dirt Tracked in Dirt. Tracked in Dirt (circle) OFFICE STATE Other Other FS & (duplicate) RB (rinsate) 96-(aand blank) FS D (duplicate) 176 (ning/fe) FS) D-(duplicate) RB-(rinsate) Category (circle) SB-(sand blank): SB-(sand blank) MORE CHANGE OF Sample Parent ID (if a duplicate sample) MA cor or in(it Approximate Sample om² m² in² 🌃 cm² m² in/ff?) Area (circle units) HVS3 Vacuum ID No. (YPB) Mak No Leak Check7 (dicle) No Nο 20 sec cleaning @ end? (Yds NW? æ No No No (circle) າ∕ີ minutes >1 minutes minutes **Total Sample Time** sinches of water inches of water inches of water Flow Drop 10 inches of water inches of water inches of water Nozzie Drop 53767226 1463621 : 33.776 597 SIR 1997/16 Field Comments GE FAME 54015910 Battle Lot Number: (circle) 1219332 Other DECONPO 1335 $\log m/O/13/O$ Lab: CLP Container: HV63 Catch Bottle = 250 mL LDPE v 032118 Completed by For Field Team Completion For Data Entry Entered by:

асы. 🔟

(Initials)

QC by:

Chas	t No :	7
****		 C

ANACONDA FIELD SAMPLE DATA SHEET (FSDS) FOR HVS3 FLOOR DUST Sampling Date: 3/27/2016 School: Headstart | Lincoln (Moodry) High | Memorial Field Logbook No: () [Other Page No: 110 Name(s): B 4. Simpson Sampling Team: (CDM Smith)Other 3 Data Item Modery HV Floor 005 Moude y HV Flow 006 Sample ID Location bym Hallway (e.g., room number, etc.) <u>Bare Floor:</u> Tile, Laminate ∕Vood Bare Floor: Tile; Laminate (Wood) Bare Floor (Tile) Laminate, Wood Sample Group Carpet Plush, Level Loop Carpet: Plush, Level Loop, Carpet Plush, Level Loop, Multilevel, Shag, Floor Mat Multilevet, Shag, Floor Mot Multilevel, Shaq, Floor Mat. (circle) Other Other Other Basement, Ground Flobr, Basement, Ground Floor, Basement, Ground Floor, J^{et} Floon 2nd Floor, 3nd Floor, 1º Floor, 2º Floor, 37 Floor, 1" Floor) 2" Floor, 3" Floor, Location Description Main Floor Main Floor Main Floor (cirde) Other Other Other Floor Dust) Floor Dust (Floor Ouel) Matrix Type Tracked in Dirt Tracked in Diri Tracked in Dirt. (arcie) Other O-(duplicat**/**e) RB (rinsata) FS \D-(duplicate) RB (rinsate) D-(duplicate) RB-(rinsate) Category (circle) S8-(send blank) SB-(sand blank) SB-(sand blank) N/A Sample Parent ID (if a duplicate sample) alo cm² m² in/(ti² cm² m² in¥n². cm² m² in² ftª Approximate Sample Area (circle units) ß ß HVS3 Vacuum ID No. No Yes Leak Check? (circle) No Yes No 20 sec cleaning @ end? Yes No Yes No No (circle) | 5 minutes minutes minules **Total Sample Time** inches of water inches of water inches of water Flow Drop inches of water inches of water inches of water Nozzle Drop 39.09 = Boltle 39.08 = Bothe **Field Comments** Bottle Lot Number: 3/27/3018 (circle) 49.36 = Fact (121975**d**) 213932 Other Deca P 1340 Decimo 1300

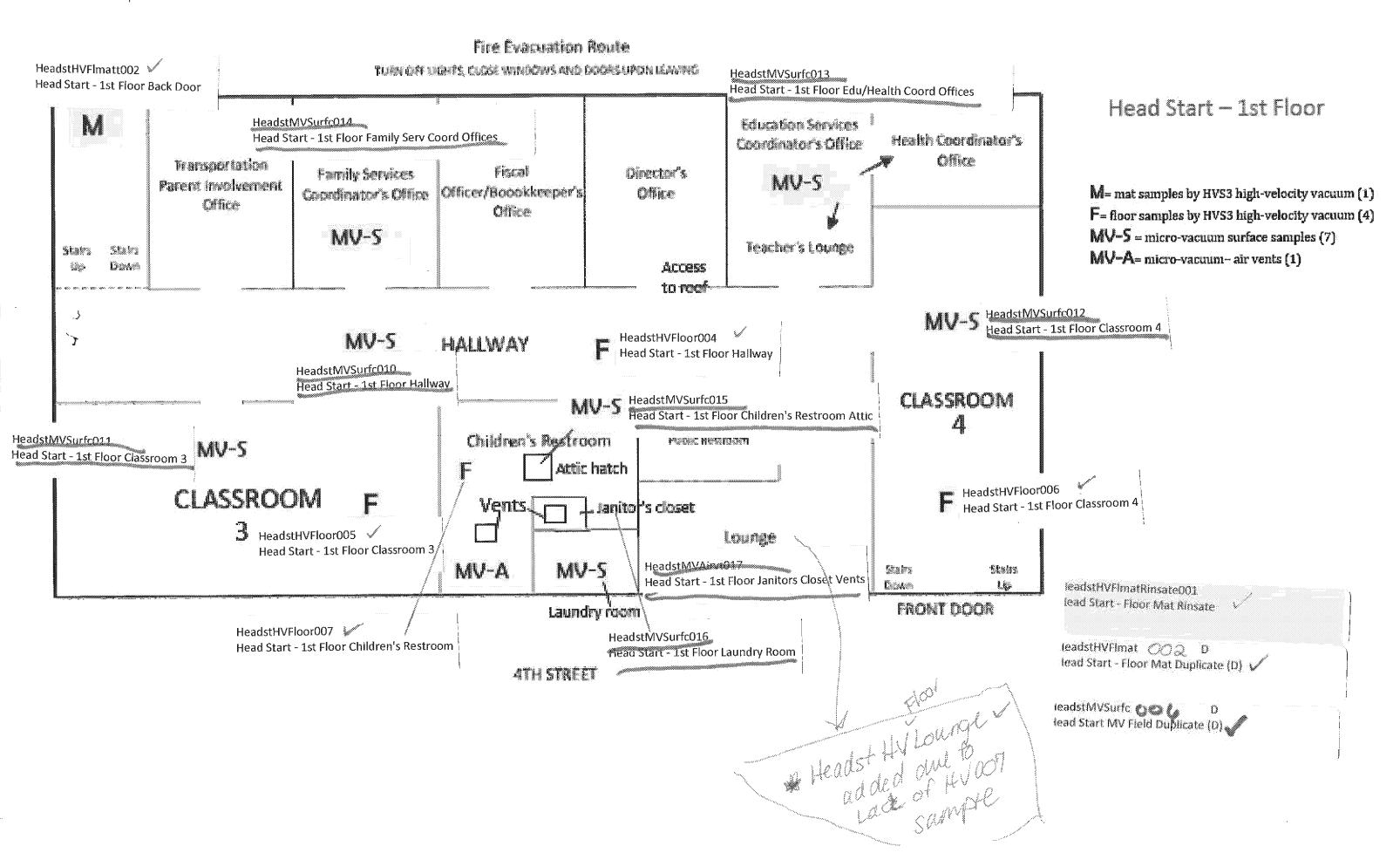
v 032118				Lab: C	LP .	Container, HVS3	Catch Bottle	= 250 mL LDP	E
		-287							7
For Field Team Completion	Completed by:	<u> (W</u>	For	r Data Entry		Entered by:			
(Init(als)	QC by: <u>I</u>					QC by			
<u> </u>									

Appendix D

Building Layouts Showing Sample Locations



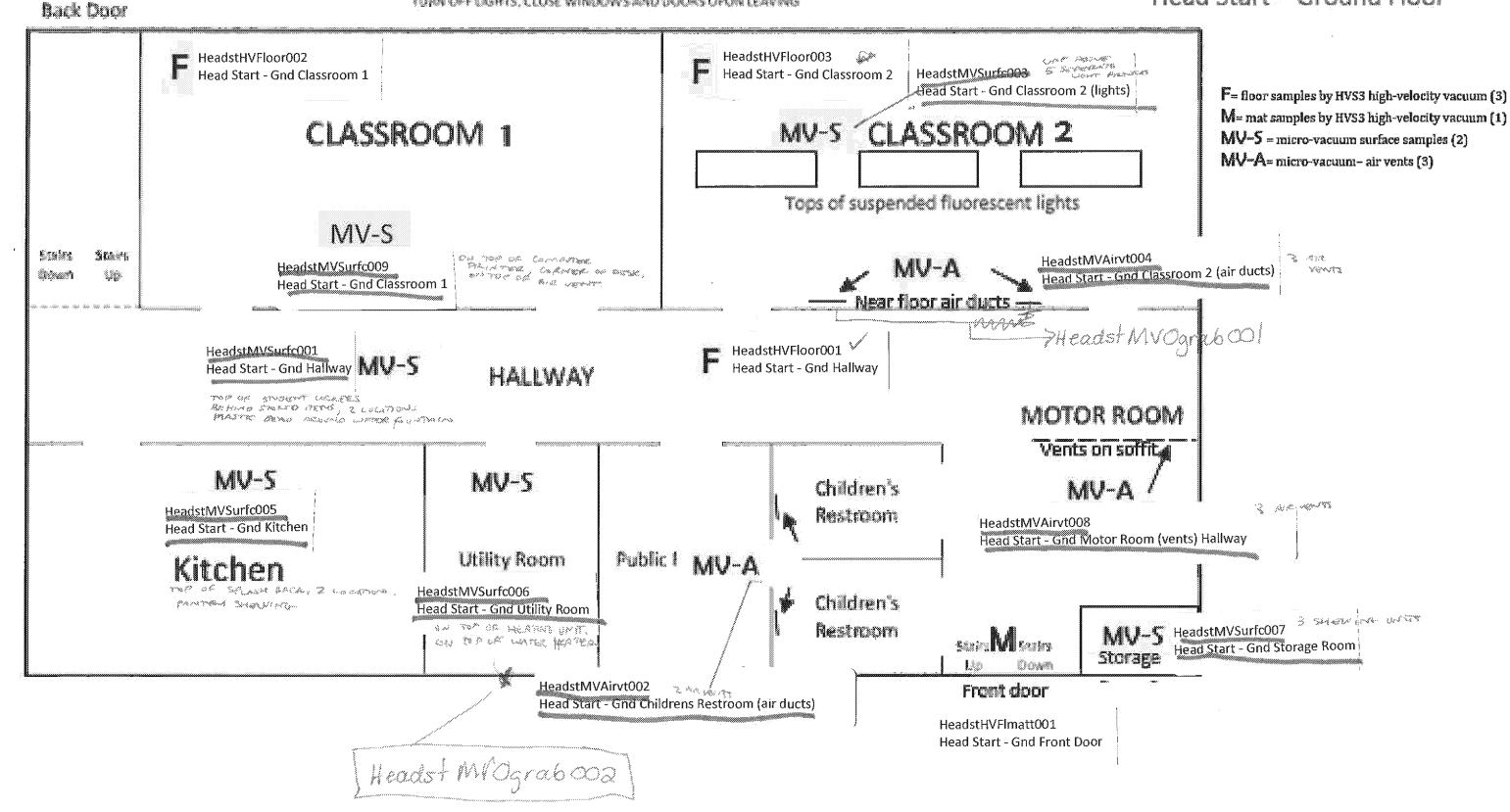


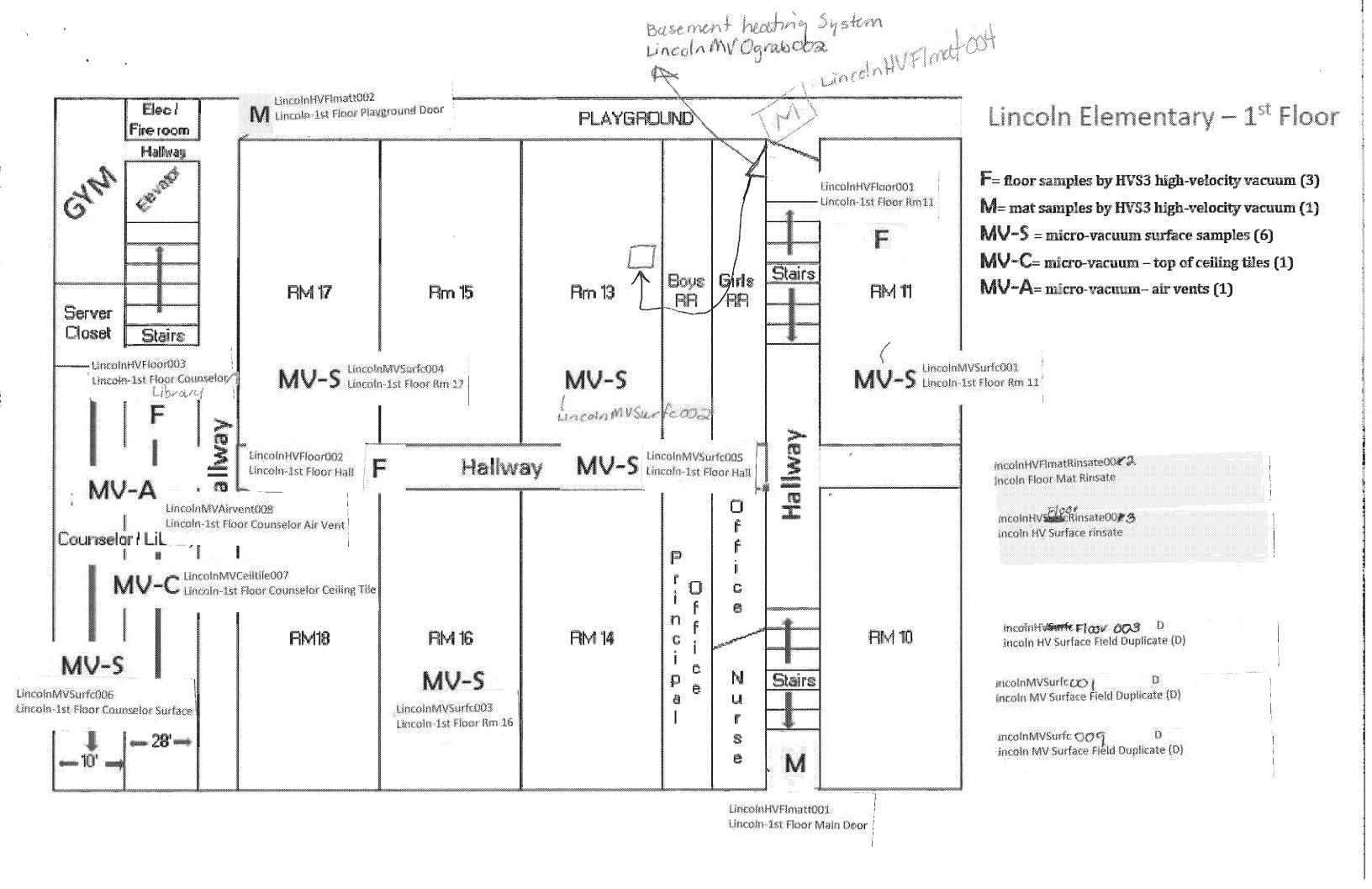


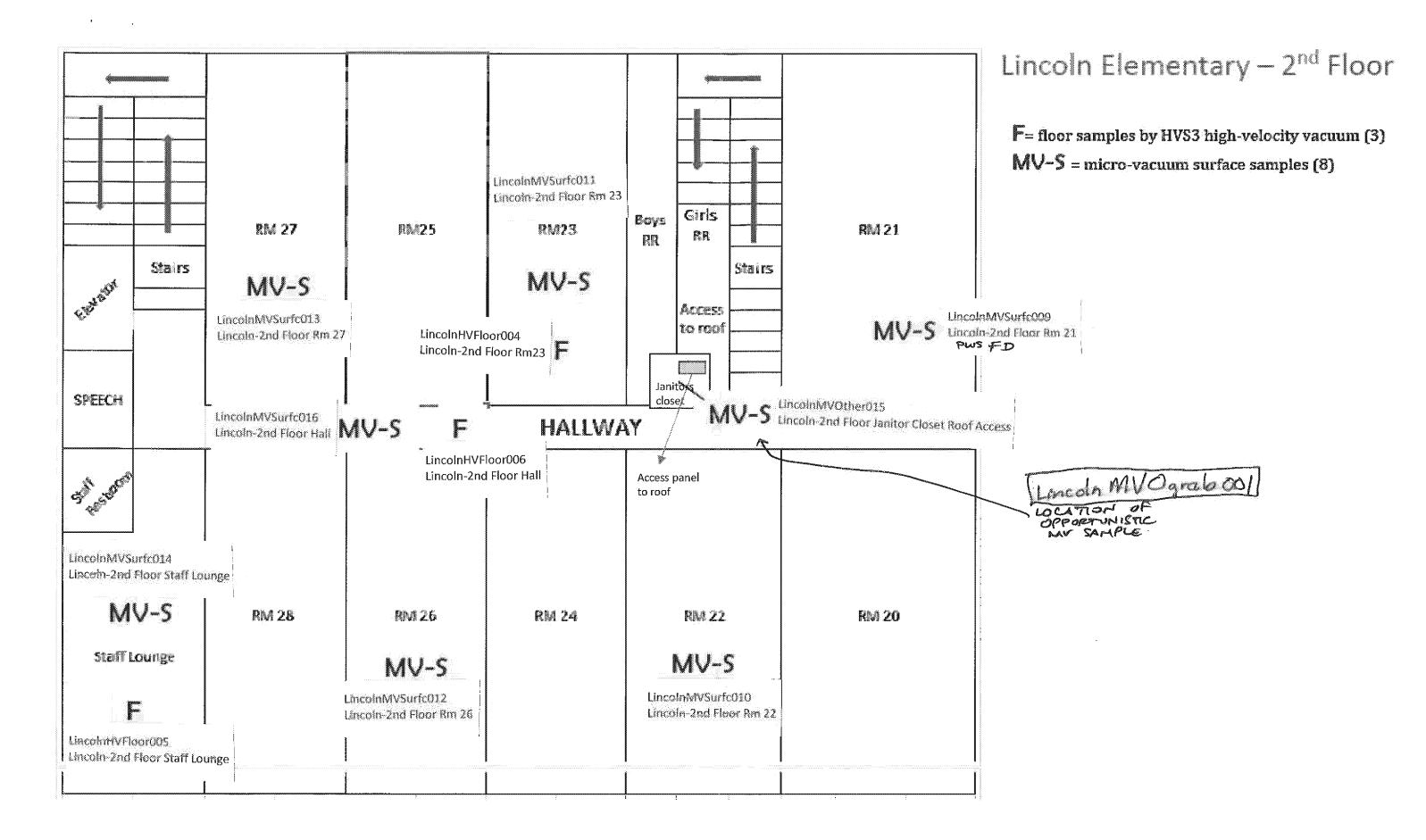
Fire Evacuation Route

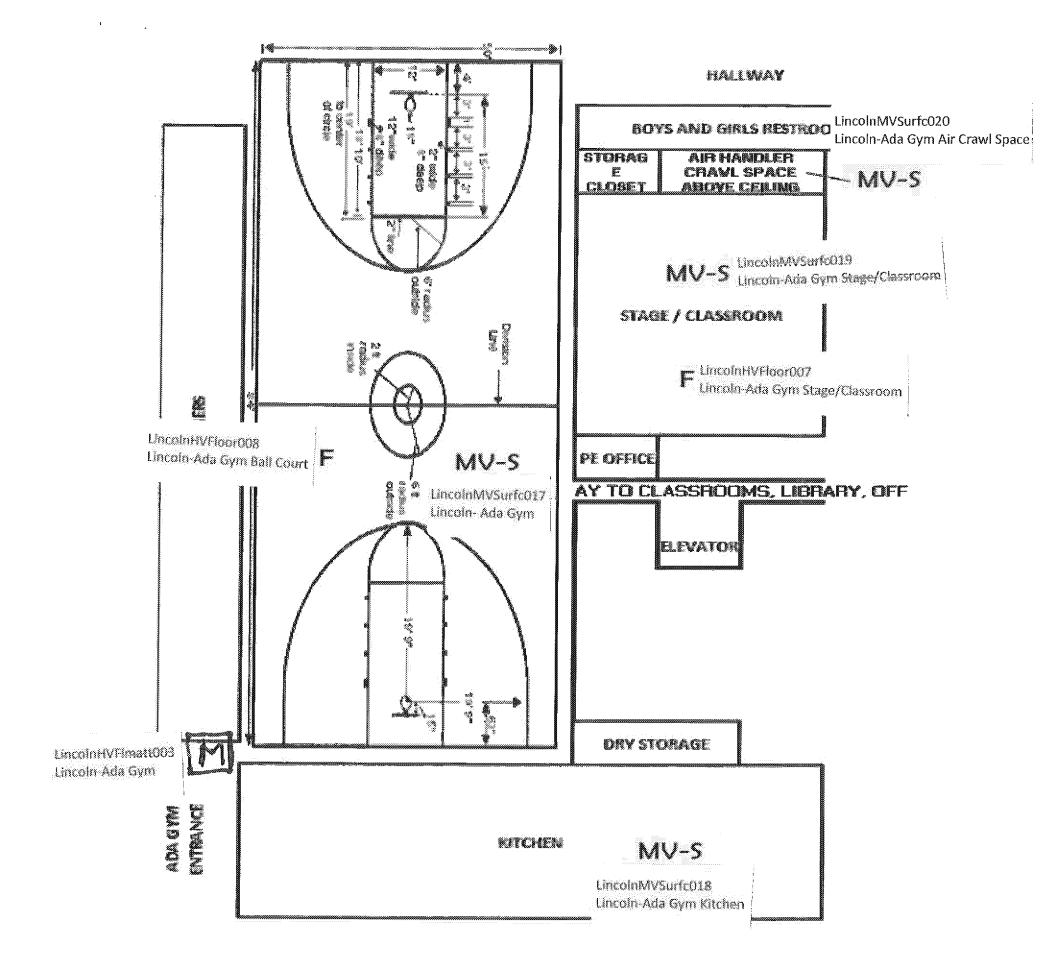
TUPN OF FIGHTS CLOSE WINDOWS AND DOORS UPON LEAVING

Head Start - Ground Floor



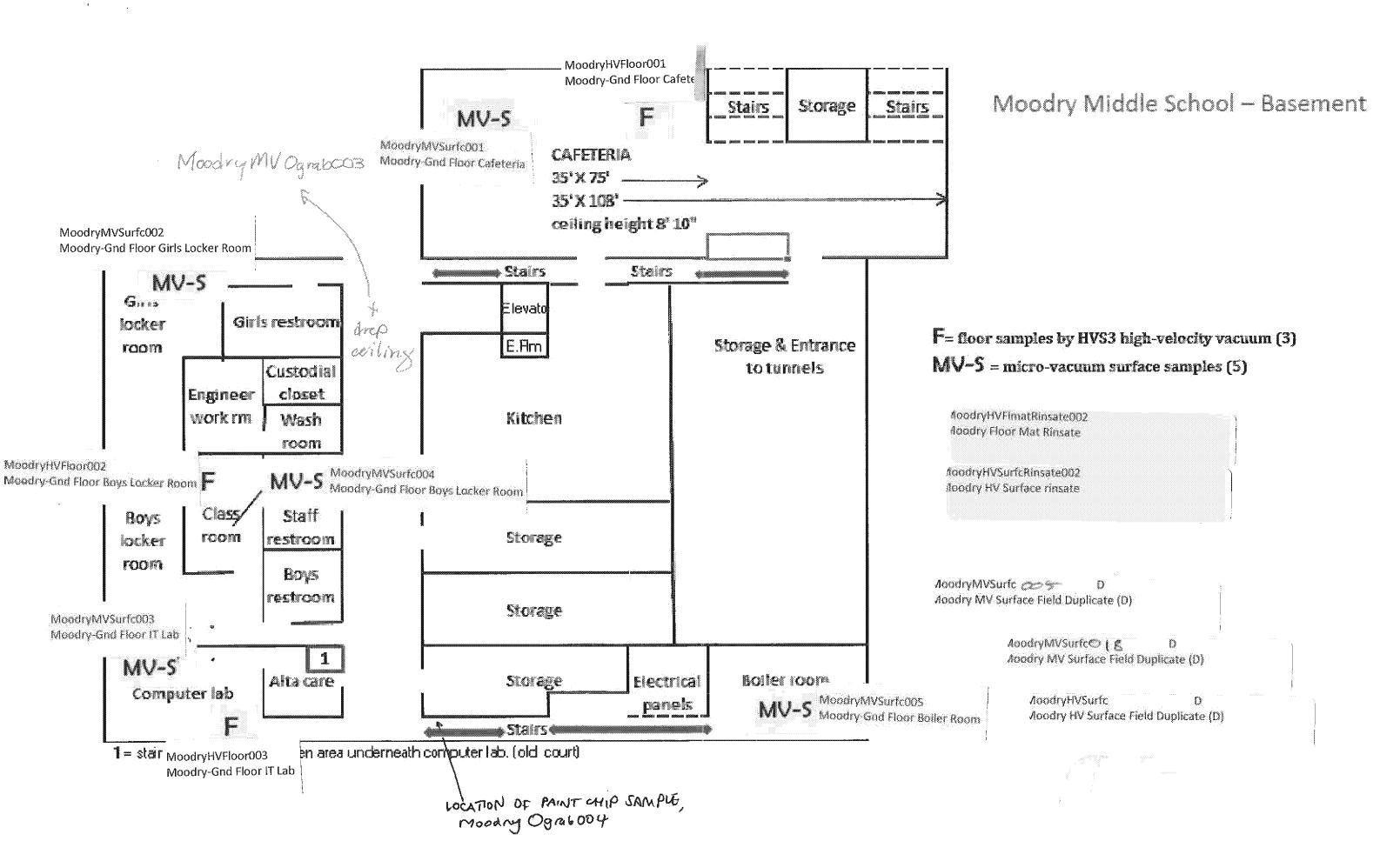


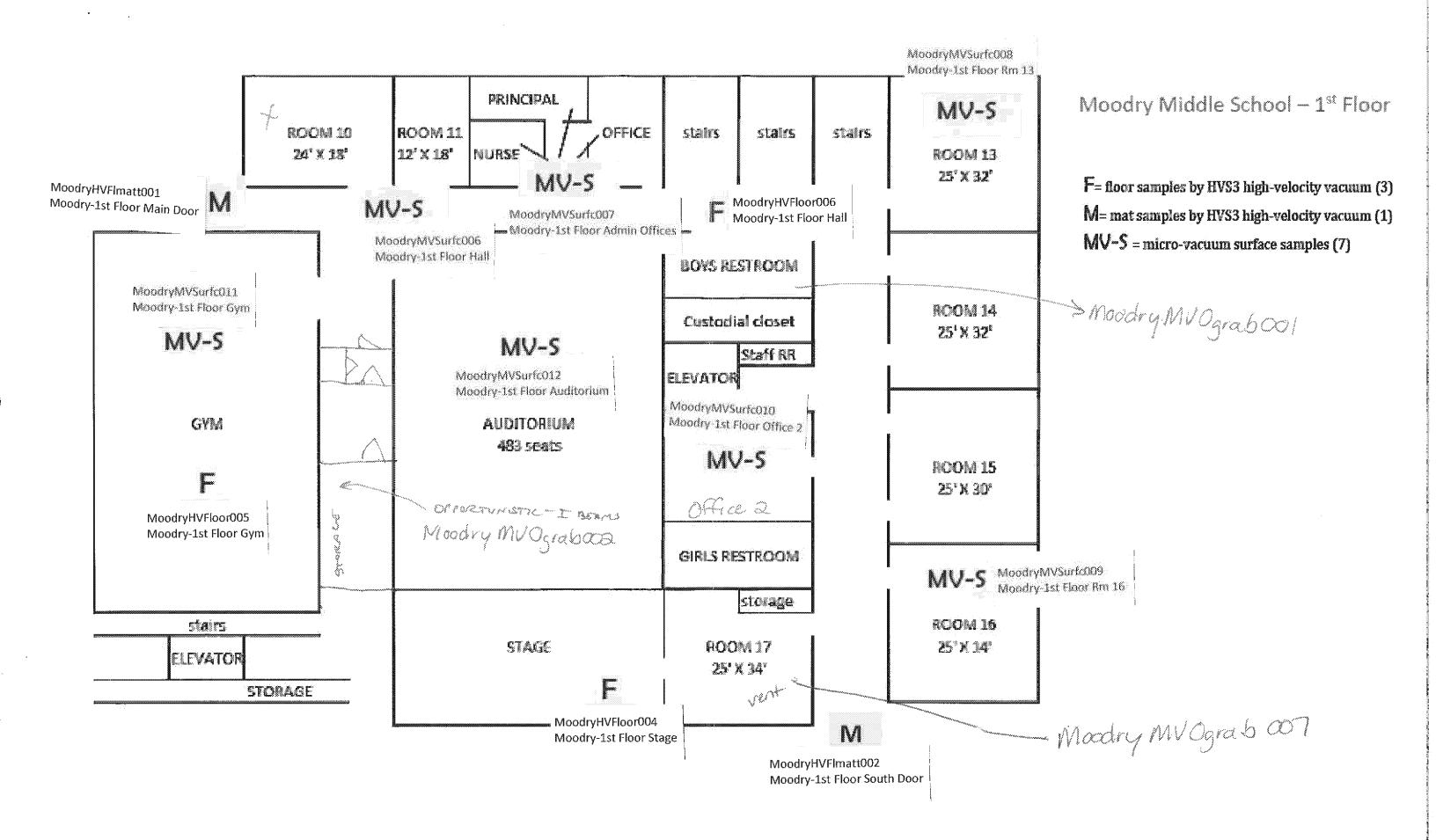


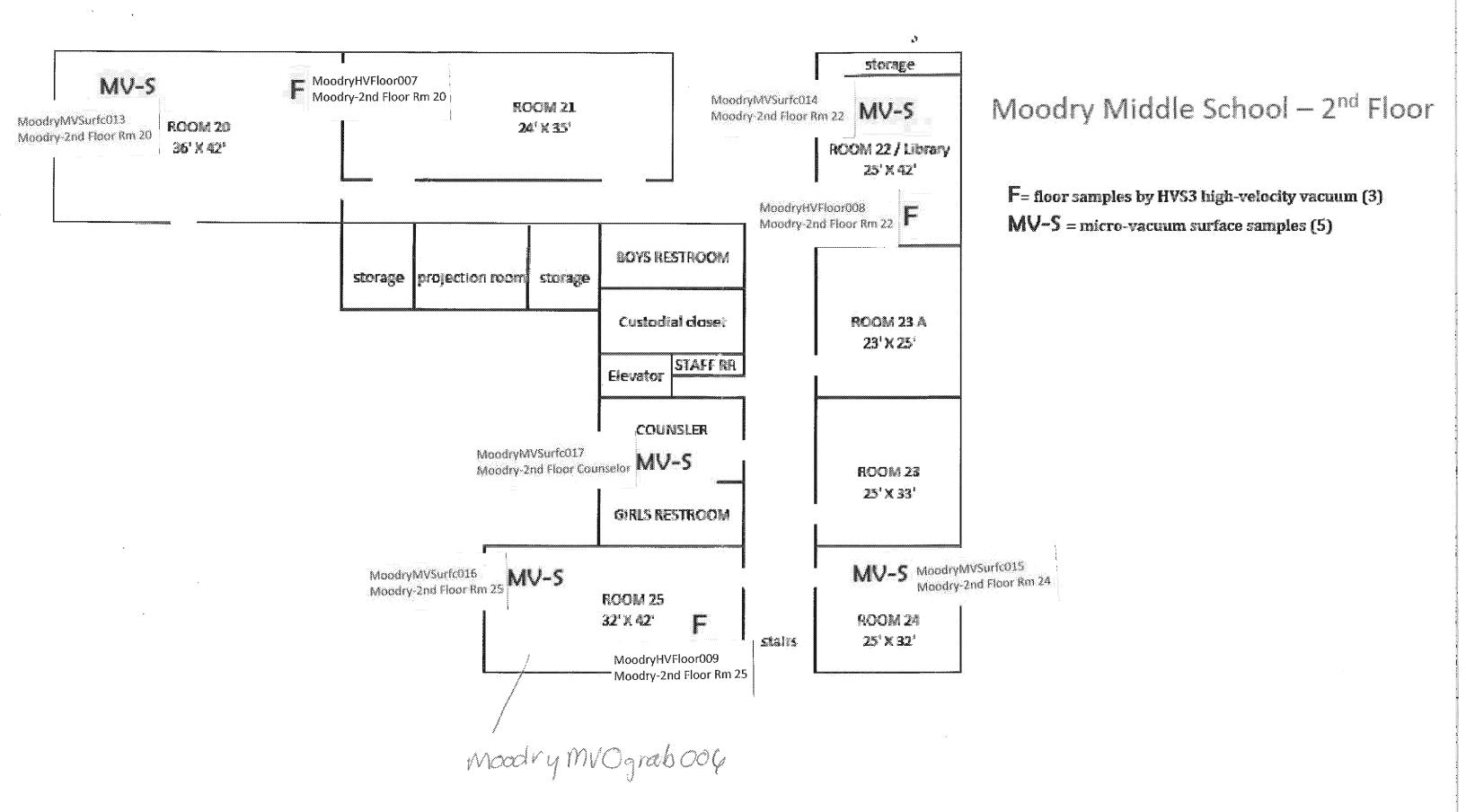


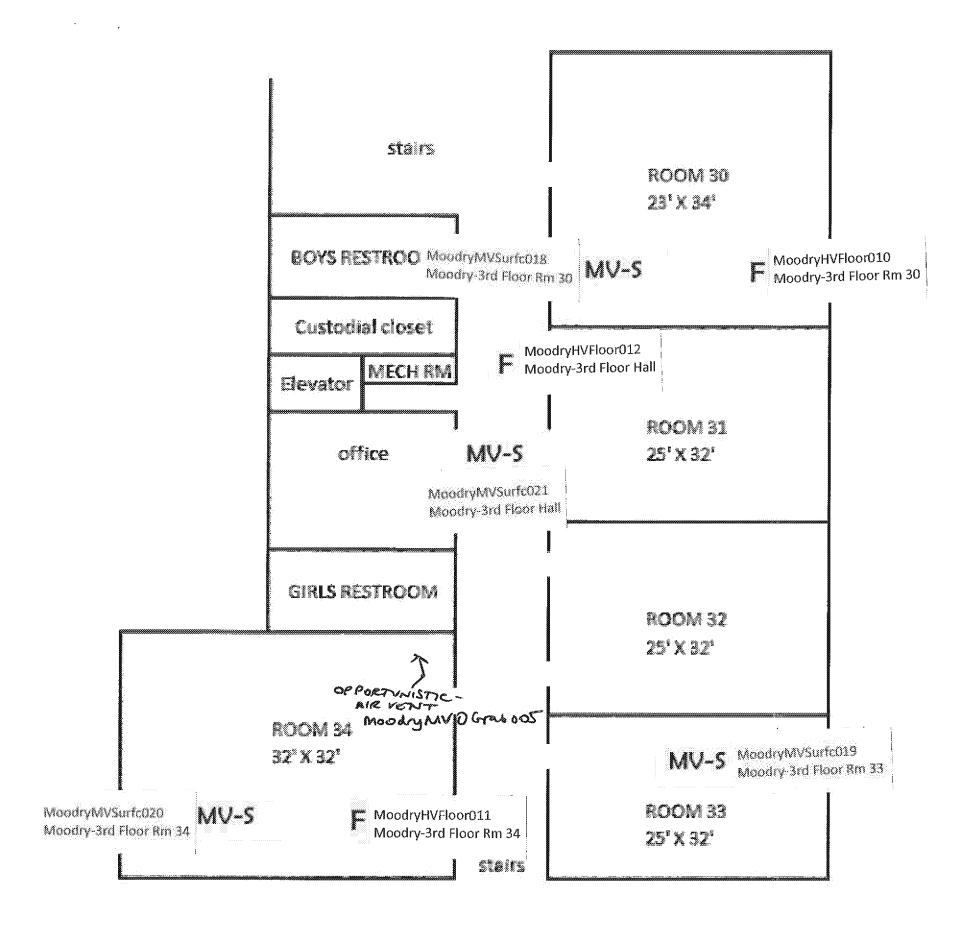
Lincoln Elementary – Ada Gym

F= floor samples by HVS3 high-velocity vacuum (2)
MV-S = micro-vacuum surface samples (4)



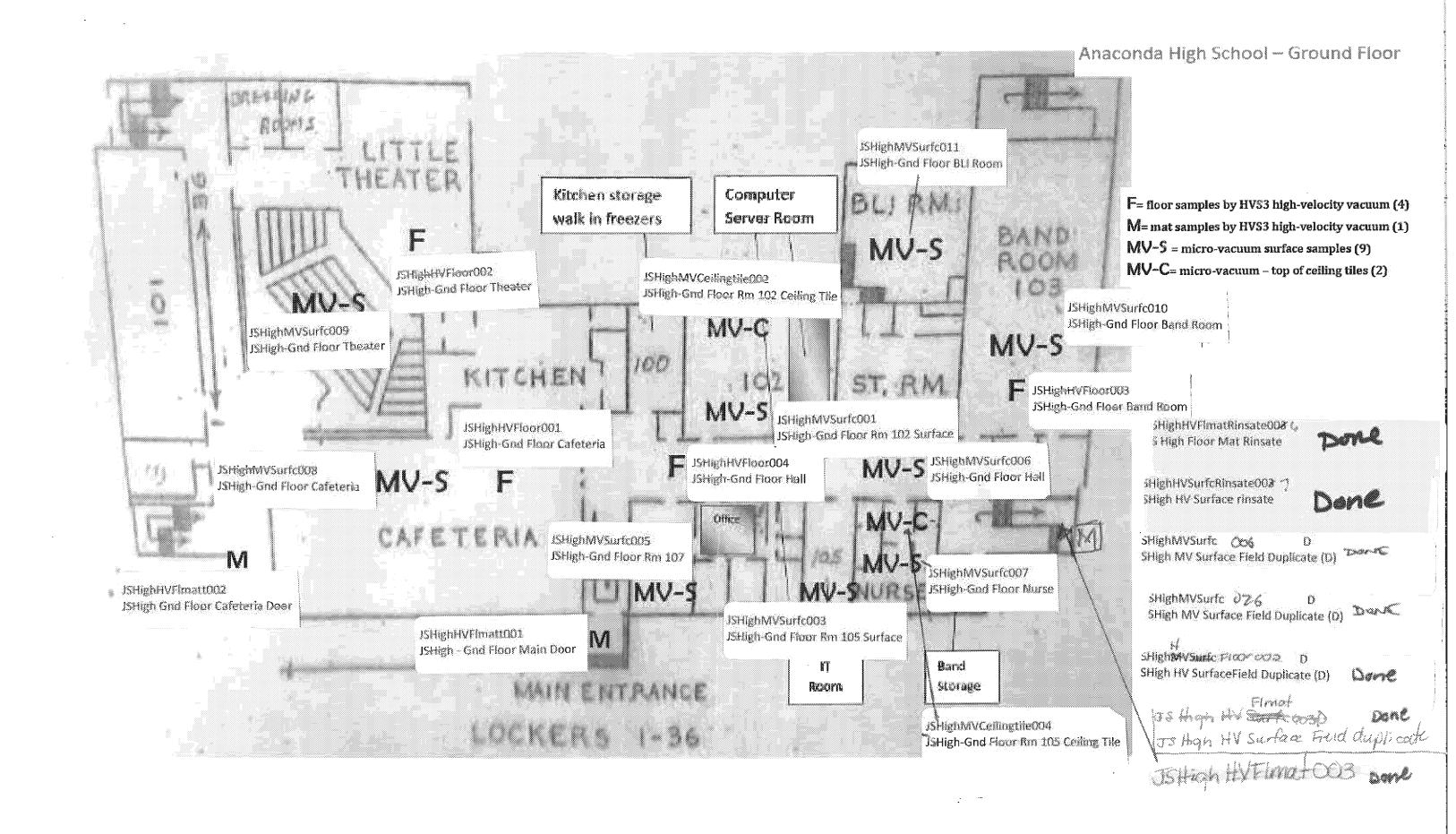


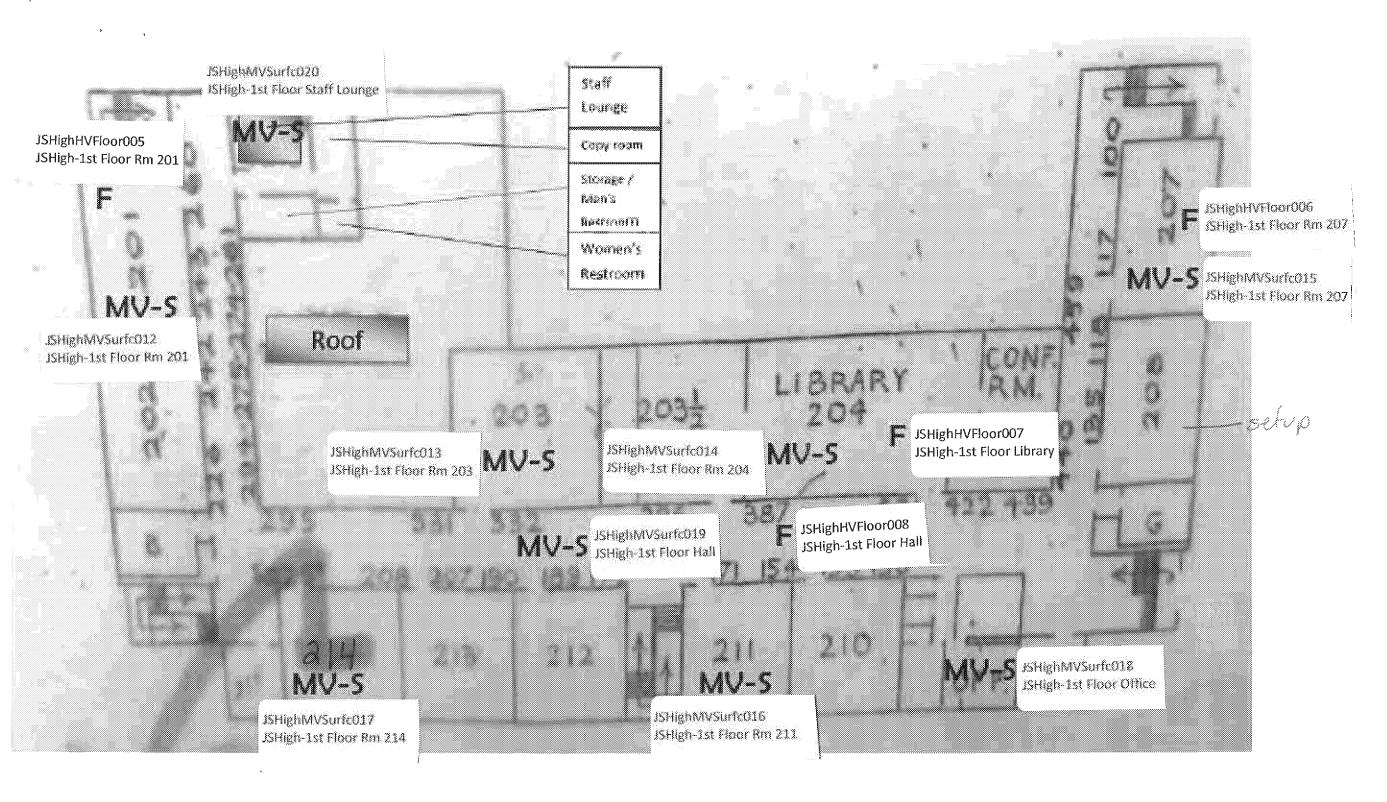




Moodry Middle School – 3rd Floor

F= floor samples by HVS3 high-velocity vacuum (3)
MV-S = micro-vacuum surface samples (4)

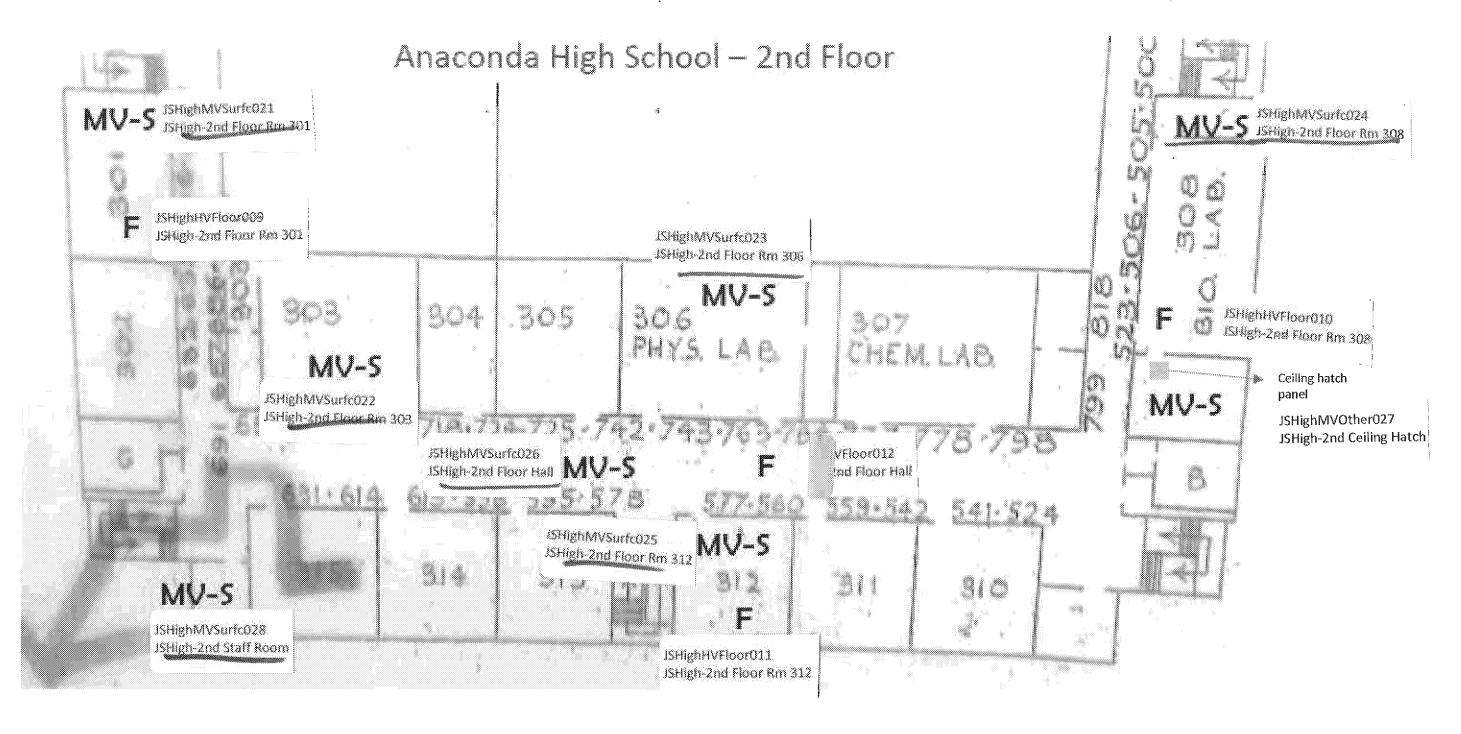




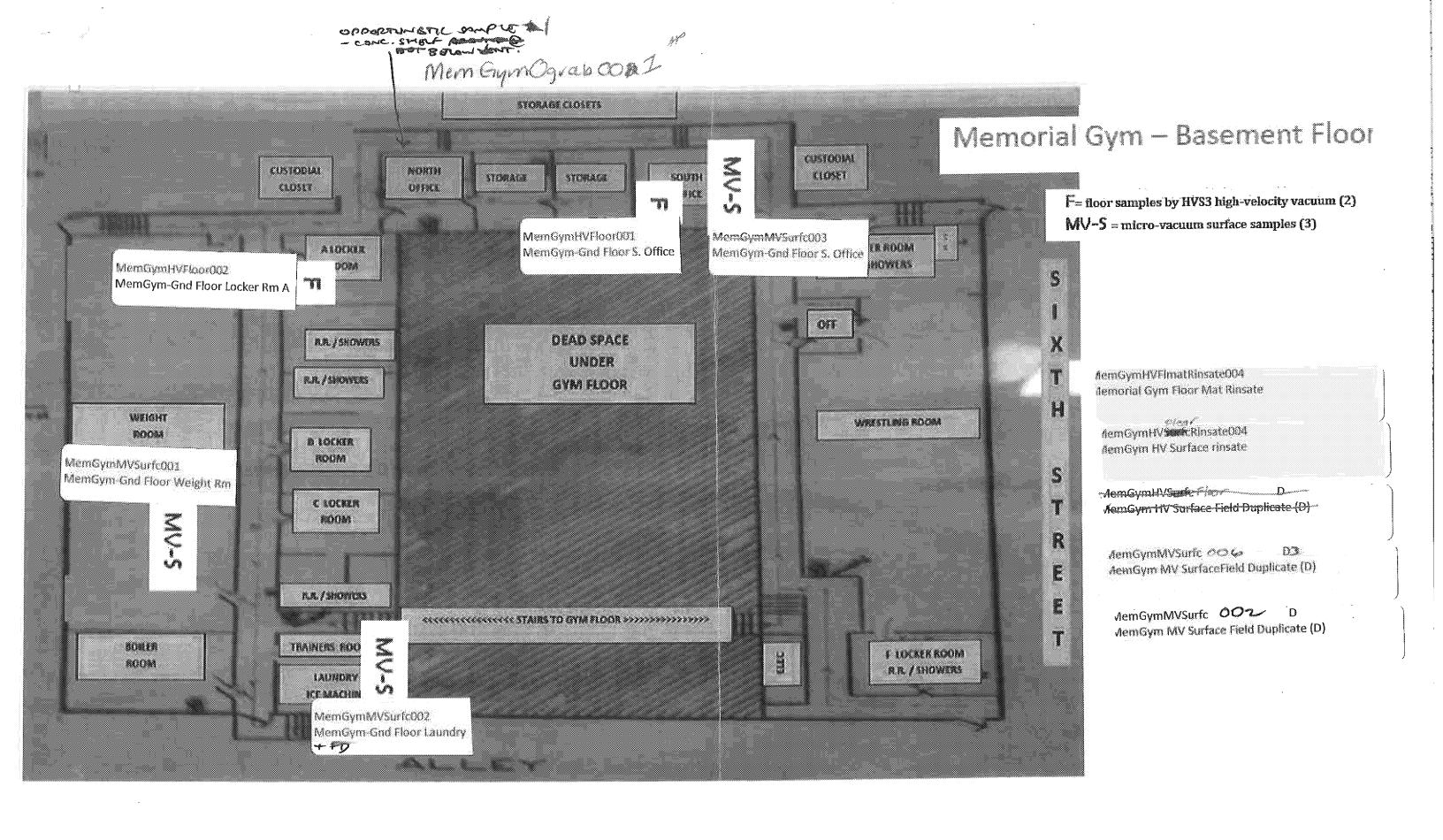
Anaconda High School – 1st Floor

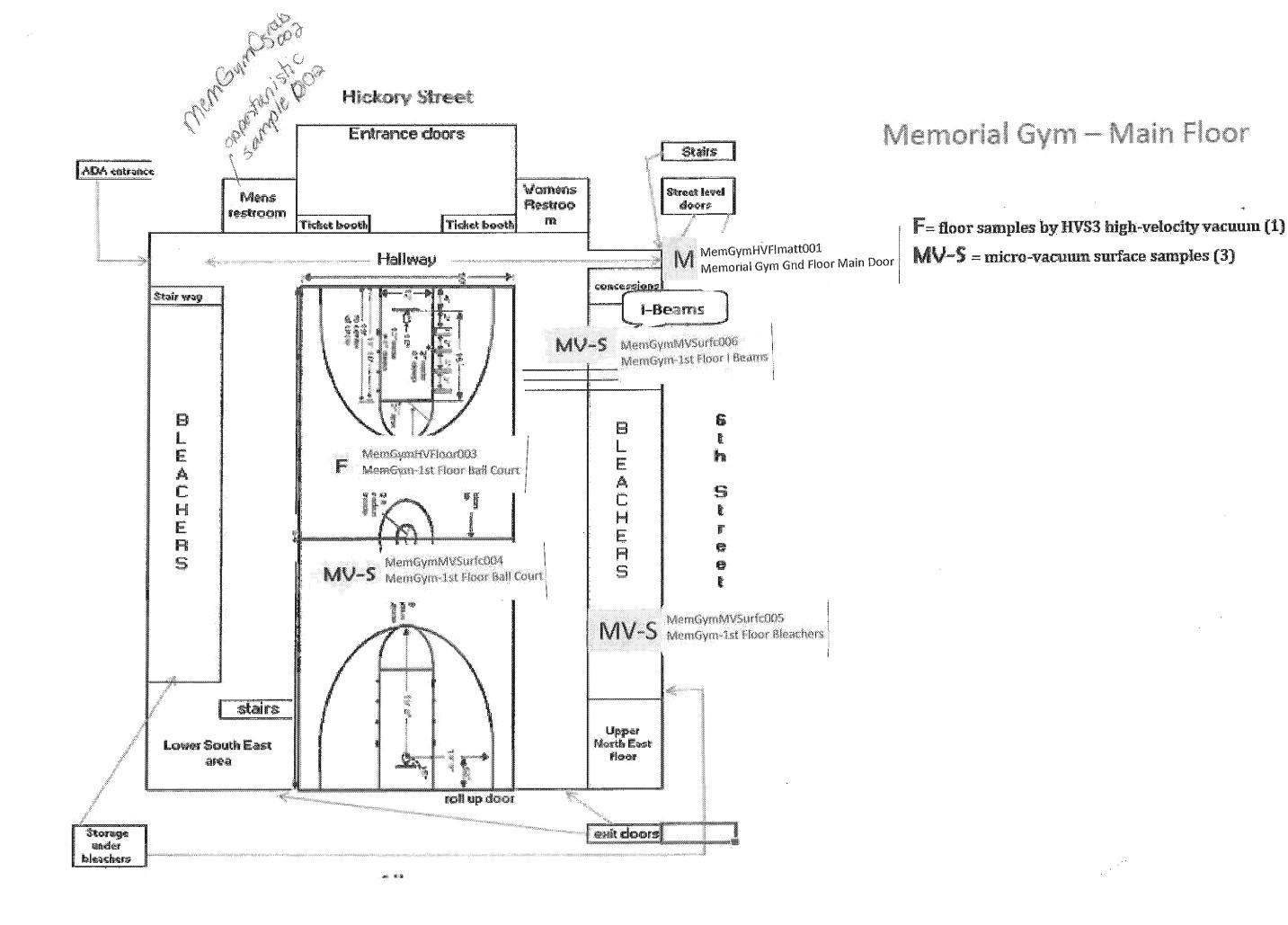
F= floor samples by HVS3 high-velocity vacuum (4)

MV-S = micro-vacuum surface samples (9)



F= floor samples by HVS3 high-velocity vacuum (4)
MV-S = micro-vacuum surface samples (8)





Appendix E

Electronic Data CD

